Lectures
ON THE
PHYSIOLOGICAL PATHOLOGY OF THE BRAIN.

Delivered at the Royal College of Physicians of London, July, 1876,

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LECTURE I.—PART III.

ON A GREAT VARIETY OF FORMS OF PARALYSIS DUE TO DISEASE IN ONE SIDE OF THE BRAIN.

Two attacks of hemiplegia on the same side, caused by successive lesions, one in the corresponding, another in the opposite side—Hemiplegia caused by lesions of the two sides of the medulla oblongata or the pons Varolii, or by both corpora striata, both lateral ventricles, or several central parts of the brain or cerebellum—Hemiplegia in cases of disease of the brain on one side and of the pons Varolii or cerebellum on the other—Appearance of hemiplegia on the side of the greatest lesion in cases of disease of both sides of the pons Varolii and other parts of the brain—Conclusions from the facts above mentioned.

As I shall have again to treat of the coexistence of facial paralysis on one side and paralysis of limbs on the other side, when I come to the subject of altern paralysis, I will now only say that it is not alone in cases of disease of the pons Varolii that this peculiar association of paralysis of face and limbs is found. It exists often in cases in which the lesion is above the pons Varolii and located only in one side of the brain. There are a few cases, however, belonging to our present subject—i. e., a lesion in two sides of the brain with paralysis only in the limbs of one side—in which that peculiar association has existed. The following case, published by a most accurate observer (Duplay), is one of that kind.*

CASE 3.—A man who had already had a slight attack of *right hemiplegia* was suddenly seized with giddiness, paralysis of the *left side of the face*, with difficulty of articulation and *left ptosis*. A few months after he fell from a chair, owing to giddiness, and had another slight attack of *right hemiplegia* and numbness in the *left arm*. The autopsy showed that the white substance of the *right* hemisphere was pinkish and softened; in the centre of that altered part, where the anterior and middle lobes meet, there was a small clot of discoloured fibrin; behind this there were two other small old clots; in the left middle lobe there was an almost fluid clot, still black; nothing abnormal in the facial nerve.

In this remarkable case we find facial paralysis and ptosis on the left side caused by a hæmorrhage in the right side of the brain. There is of course nothing surprising in the production of this paralysis in the face and eye, but how is it that there was not also some degree of paralysis of the left limbs? And, still more, how can it be, if the generally admitted views are correct, that at one time the patient was attacked with hemiplegia of the *right* side, from a hæmorrhage in the white substance of the *right* side of the brain, and that later on he had another attack of *right* hemiplegia from a hæmorrhage in the *left* middle lobe? In this case we see that a lesion in the right side of the brain produced hemiplegia on the same side, then a second lesion on that side again caused facial paralysis and ptosis on the left—i.e., on the opposite side,—and at last a third lesion, this time on the left side, produced paralysis in the same limbs where it had first appeared—i.e., those of the right side,—with some numbness of the left arm. Paralysis, therefore, in cases of brain disease, is so little the effect of the loss of function of a pretended motor centre or of motor conductors, that twice in the above case we see it appear in the right limbs; in the first instance from disease in the right side of the brain, in the second from disease in the left side of that nervous centre.

The recorded cases of lesion occupying pretty nearly the same extent on the two sides of the middle line of the brain, and producing paralysis only in one side of the body, are somewhat numerous. I will mention some of the most striking. Abercrombie† gives the following history:—

CASE 4.—A child had squinting *and loss of power of the right arm and leg*, and died in convulsions. He had had no coma, and had taken notice of objects a very short time before death. There were several ounces of fluid in the ventricles of the brain. In the substance of the *medulla oblongata, where it is crossed by the pons Varolii, there was an abscess which appeared to occupy its whole diameter*. It was contained in a cyst.

It is a great pity that more details were not given by Abercrombie. In what direction was the "whole diameter" of the medulla occupied by the cyst? We do not know; but it seems evident that the lesion was central, and extended notably on the two sides, although, contrarily to the views I consider as false, there was paralysis on one side only.

Professor E. Gintrac, of Bordeaux,† gives full details of an interesting case in which there was left hemiplegia and no other lesions but arachnitis on the two sides with more marked vascularisation on the right, besides some small clots of blood, and a softening of the central parts of the pons Varolii, where no appearance of nerve-fibre was found. Did the hemiplegia depend on this central lesion, or on the arachnitis? If due to this last cause (which was slight, and without any inflammation of the cortical substance) we should have to admit, contrarily to the received views, that a slight inflammation of the meninges can produce paralysis, and that a very slightly greater degree of meningeal inflammation in one side compared with the other, is in appearance sufficient for the production of paralysis in the limbs of one side rather than in those of the other. If we dismiss the idea that the arachnitis and the few small clots on the surface of the brain had produced the left hemiplegia, and try to explain it by the lesion found in the pons Varolii, there is then the difficulty, for those who hold the view that paralysis depends on the loss of the function of the part diseased, that there was only a left hemiplegia although the disease occupied apparently equal parts of the two sides of the pons Varolii. With the old views such a case cannot be explained, while, if we admit that paralysis appears only from an influence exerted on distant nerve-cells in many parts of the nervous centres, by an irritation starting from the place where we find disease, what occurred is easily explained. With the view I maintain it is easy to understand that in this case the left hemiplegia may have been caused either by the arachnitis, or by the lesion in the pons Varolii, or by both.

The same reasoning applies to a great many other cases in which the pons Varolii was diseased in its central parts, equally or nearly so on the two sides, with no lesion, or a very slight lesion, elsewhere. It applies also to cases in which there was blood effused either in the fourth ventricle or in front and on the sides of the pons Varolii, or in which there were tumours pressing upon that organ on the two sides. I will merely call attention to cases published by Dr. Rendu,‡ Sardaillon,§ Bell ‖ Graves¶, and Lager**—cases the details of which ought to be studied by persons particularly interested in the questions discussed in this course of lectures. I cannot avoid giving a summary at least of one case of that kind, and I select the following because it has been put on record by an able London surgeon, Mr. G. W. Callender.††

CASE 5.—A man had complete loss of motion in the *left side of his face and the left external rectus muscle*, with incomplete loss of motion in the *right half of his body*. He died after convulsions followed by coma. At the bottom of the *right* ventricle there was a narrow recent clot, continuous with another which filled the third and fourth ventricles, and spread out over *the pons Varolii and the medulla oblongata—parts which were soft, almost diffluent.*

* Journal Hebdomad. de Médecine, 1836, vol. iii., p. 165.

† Pathological and Practical Researches on Diseases of the Brain. Fourth Edition. Edinburgh, 1845, p. 103.
† Cours Théorique et Clinique de Pathologie Interne. Paris, 1860, vol. viii., p. 360.
‡ Prog. de Médical, 5 Juin, 1875, p. 312.
§ In Traité des Maladies Syphilit. du Syst. Nerveux, par Lagneau, p. 393.
‖ Bull. Soc. Anat., 1834, vol. ix., p. 26.
¶ Lectures on Clinical Medicine, 2nd edit., 1848, vol. i., p. 314.
** Quoted by Gintrac, loc. cit., vol. vi., p. 393.
†† St. Bartholomew's Hospital Reports, vol. iii., 1867, p. 437.

In this case, if we admit that it was the lesion in the right ventricle which caused the paralysis, all is correct as regards the old views, so far as we only look to the loss of motion in the face (which was on the left side); but all is wrong when we consider the paralysis of the body (which was on the side of the lesion—i. e., the right side). If we admit that it was the pressure on the pons Varolii and the medulla oblongata (pressure apparently just the same on the two halves) which caused the paralytic symptoms, why was there not, instead of an altern paralysis, a general loss of motion in the two sides of the face and of the body? Taking into account that the parts I have spoken of till now—i. e., the medulla oblongata and the pons Varolii—are the only channels of communication between the organ of will and the spinal cord, the spinal motor nerves and the muscles, it is a very important argument against the views generally received as regards the mode of production of paralysis that it will sometimes appear in only one half of the body when there is disease of the central parts of those organs, or of their outer segments on the two sides, with destruction of nearly if not entirely the same conductors on the right and on the left sides of those nervous centres.* As we know that the excitability of one half of the body is often greater than that of the other, it is very easy, according to the views I maintain, to understand how in some cases a lesion exciting fibres and cells in the two halves of the base of the brain will produce paralysis in certain individuals in one half of the body only.

As the corpora striata are considered as centres of voluntary movement, it is well to ascertain if, like the pons Varolii, they can also be diseased on the two sides, while paralysis appears only on one side. There are many such cases on record. In a case of almost complete destruction by softening of the *right corpus striatum*, with a slighter softening of the left, there was paralysis of the *right* arm only. In this case, recorded by one of the best clinical teachers of France in this century, Professor Rostan,† there was, it is true, only a slight alteration of the left corpus striatum, but the paralysis was on the *right* side—i. e., the corresponding side to that of the greatest lesion. Besides, we find that the arm only was paralysed, yet the destruction of the right corpus striatum was almost complete. If we accept the old views, we have to admit that the lesion, however slight, in the left corpus striatum had produced the paralysis of the right arm; and that the lesion, however considerable, in the right corpus striatum had produced no paralysis. But we have no right to dispose of facts in such a manner, and we must admit that the old views cannot explain this case. According to the views I hold, paralysis was not a necessary effect of the existing lesions, and its appearance could as well have been on one side as the other, and its occurrence on the right side may have been caused by the slight as well as by the great lesion, and perhaps even by both.

In an important case of Mr. Callender's‡ a woman who was attacked with paralysis of the *right* limbs, chiefly the leg, without facial or lingual paralysis, died comatose shortly after convulsions. The outer half of the *left* corpus striatum, and the adjacent brain-tissue, were converted into a red-brown pulp. The *right* corpus striatum and the *right* optic thalamus were equally soft and red. Old coagula existed in the *right* internal carotid and its anterior and middle branches, and also in the tertiary branches of the *left* middle cerebral. The lesion, evidently much greater on the *right* than on the *left* side of the brain, coexisted with a paralysis limited to the *right* side. As I have said for the case of Rostan, it is clear, then, that this fact is entirely out of agreement with the admitted views, while we can easily understand it if we accept notions like those I propose.

Dr. Peter Eade has also published§ an important case showing that, with disease in both corpora striata, paralysis may appear only in one side, and that the one corresponding with the most altered corpus striatum, just as it was in the cases of Rostan and Mr. Callender.

In other cases, the alteration being in appearance exactly similar in the two corpora striata, there was a paralysis of only one arm. So it was particularly in a case of Leuret* and another of Broc.†

What I have said of the corpora striata applies also to cases of disease of the two lateral or of all the ventricles. I will only mention a case of right hemiplegia with no other lesion than a great distension of all the ventricles by a pellucid fluid, amounting to at least six ounces‡—a case of Biumi,§ in which there was hemiplegia and trembling on the right side, with a great effusion of blood in the two lateral ventricles, and clotted blood in the sella turcica and under the pons Varolii; two cases of Sadourny,‖ in one of which there was left, and in the other right hemiplegia, with an effusion of blood in both lateral ventricles.

Cases relating to other parts of the brain lead to the same conclusions that I have stated against the admitted views. For instance, a case of Abercrombie,¶ in which a coagulum of the size of a musket-ball was found in the iter ad quartum ventriculum, apparently the sole cause of paralysis of the left arm; a case of Mohr,** in which paralysis on the right side existed, with a tumour the size of an egg at the place of the pituitary gland; a case of Albers,†† in which there was hemiplegia, with a tumour on the corpus callosum, pressing equally on the two sides of the brain; a case of Guiaud,‡‡ in which there was left hemiplegia, with a hæmorrhage in the vermis superior of the cerebellum. It would be easy to swell this list considerably in adding to it cases of softening of the central parts of the brain (the septum lucidum, the corpus callosum, &c.), but as a rule, unless obliged to, I prefer not to make use of cases of white softening.

From most of the facts I have mentioned, it clearly results that *hemiplegia or paralysis of one limb only may be produced by disease occupying equal or almost equal parts of the brain on the two sides of the middle line, or similar parts on the two sides at some distance from that line*—a fact in absolute opposition to the views universally admitted as regards the production of paralysis in cases of brain disease.

According to the generally received views, when two lesions exist in parts of the brain, one of which is considered as more powerful than the other in its supposed share in producing voluntary movements (the first one being in one half of the brain, the second in the other half), paralysis may appear only in one side of the body, but that side must be the one opposite to the half where the supposed most powerful organ is diseased. This is certainly not what we always observe. In a case of Dr. Graham's§§ there was a tubercle the size of a hazel-nut to the left of the pons Varolii, and another and smaller one in the right corpus striatum. There was paralysis of the left side of the body and face, and, later, rigidity of the right arm. I mention this case because it gives me the opportunity of stating that the excitability of the corpora striata, and that also of the optic thalami, is greater as regards the power of producing paralysis than that of the pons Varolii, even in its front part, where it is supposed that the voluntary motor conductors are all agglomerated. It is not possible to avoid recalling to your mind the kind of law laid down by Andral,‖‖ that when there is simultaneously a lesion in one side of the brain and another in the other side of the cerebellum, if paralysis supervenes, it appears on the side corresponding with the cerebellar alteration and opposite to the cerebral lesion. This is a remarkable rule, but it is not absolutely constant, as I will show hereafter. But, whether constant or not, how can it be, according to the old views, that a lesion of the cerebellum—when there is no pressure exerted upon the pons Varolii—should ever cause paralysis? The most that could exist, according to those views, would be an alteration in the power of directing movements, and not one of the common forms of

* I will only refer here to another class of cases of pressure on the pons Varolii, in which there is also sometimes only hemiplegia. That class is composed of cases of aneurism of the basilar artery, or of plugging of that central artery. My friend, Dr. J. W. Ogle, Dr. van der Byl, Dr. Ruschenberger, Mr. E. Copeman, and others, have published such cases.

† Rech. sur le Ramollissement du Cerveau, 2nde edit., Paris, 1823, p. 36.

‡ St. Bartholomew's Hospital Reports, vol. v. 1869, p. 7.

§ THE LANCET, August 5th, 1867, p. 134.

* Journal des Progrès des Sciences, &c., vol. xi., p. 167.

† Appréciation des Progrès de la Physiol. Strasbourg, 1837, p. 44.

‡ A Collection of Cases of Apoplexy, by E. Copeman. London, 1845. p. 55.

§ Quoted by Gintrac, loc. cit., vol. vii., p. 275.

‖ Quoted by Gintrac, loc. cit., vol. vii., pp. 280 and 281.

¶ Loc. cit., p. 266.

** Quoted in Symptomat. und Diagnostik der Hirngeschwülste, von Dr. P. Ladame. Würzburg. 1863. No. 131, p. 144.

†† Ladame's work just quoted. No. 174, p. 194.

‡‡ Clinique des Hôpitaux, vol. i., No. 70. Quotation of Gintrac, loc. cit., vol. vii., p. 309.

§§ THE LANCET, vol. i., 1829-30, p. 561.

‖‖ Clinique Médicale, quatrième edit., Paris, 1840, vol. v., p. 656.

hemiplegia. Still more, there is no doubt that in some of the cases in which there has been a paralysis on the opposite side to that of a cerebral lesion, with another lesion in the side of the cerebellum corresponding with the paralysis, this last lesion was such as to produce a pressure on the pons Varolii. So that we come to this state of things: that generally when a pressure upon one-half of the pons Varolii by blood effused in the cerebellum exists alone, it causes a crossed paralysis; while it seems not to cause a paralysis at all, or if it helps in causing it the effect is produced in the corresponding side of the body, when there is, together with the lesion in the cerebellum, another in the opposite side of the brain proper. If you remember what I said a moment ago, that the pons Varolii can, without causing paralysis, bear pressure easier than some other parts of the brain, you will easily understand that a large clot in the cerebellum pressing on the pons will not always cause paralysis; but why is it that when there are two causes of paralysis—one in the brain proper, able to produce that symptom in the left limbs (for instance), and another in the pons Varolii, able to produce it in the right limbs—why is it, I repeat, that almost always then it should be the first that causes paralysis, and not the other?

The answer to that question neither the views I am endeavouring to establish nor the old ones I criticise can give at present. But—and this is the reason of my having brought up this topic now—there is a general tendency in all parts of the encephalon, when there is disease on the two sides, to give rise to paralysis only on one side. This we see not only in cases of disease of the brain on one side and of the cerebellum on the other, or, as I have shown already, in disease in the two halves of the pons Varolii or in both corpora striata, but also in cases of disease located in a part of the cerebral lobes on one side and in another and quite different part of the lobes of the other side. This point will come out fully from the facts I shall now have to mention as showing that *when there is disease in the two halves of the brain it is not rare at all that paralysis will appear on the side of the most marked or most extensive cerebral lesion.* A double and considerable hemiplegia, as I should have stated before, is relatively rare even in cases of disease of the two sides of the brain,—excepting, perhaps, when there are extensive alterations of the cerebral convolutions. The tendency to the production of one-sided paralysis either on the opposite side or on the corresponding one to that of the most extensive lesion, is certainly very great.

The number of cases that I could give showing that, in cases of disease of the two sides of the brain, paralysis can appear on the side most injured or altered is extremely large. I will only mention hastily some of the most interesting.

Dr. G. May* has seen a case in which there was paralysis, at first limited to the *right* limbs, extending, but to a less degree, to the left side. There was an abscess in the *right* half of the pons Varolii, and the whole surface of that nervous centre was ulcerated, and four ounces of fluid were found in the ventricles.

Kingston† has recorded a case in which there were trembling, numbness, and an incomplete paralysis of the *right* limbs. Death took place from accidental poisoning. There was an aneurism of the *right* internal carotid just before its entrance into the cranium, and another (size of a filbert) of the basilar artery. The pons Varolii was flattened and soft, and the *right* ventricle dilated by serosity.

Dr. Martineau‡ has published an important case, in which not only was there a much greater lesion on the side of the paralysis than on the other, but the paralysis was not constant, and came on by attacks, which, although in the same limbs, perhaps occurred at the time of an extension of the disease from one place to another, either in the same or in the other side. The *left* side of the pons Varolii and the *left* corpus striatum were inflamed in several places, and there was an old effusion of blood in the *right* corpus striatum. The paralysis always appeared in the *left* side.

Dr. Sims§ has given a still more remarkable case of *right* hemiplegia allied with atrophy of the two anterior lobes and the two optic thalami, with destruction of the *right* corpus striatum and slighter alteration of the *left*.

Cazauvielh,* in a good paper on Atrophy of the Brain, has recorded an important case of long-continued paralysis and atrophy of the *left* limbs, with atrophy of the *left* hemisphere, and only a slight alteration of the *right* posterior lobe.

For some other valuable cases, I will simply quote the following authors:—Campana,† Bayle,‡ Lallemand,§ Constant,‖ Boinet,¶ Cheyne,** Wenzel,†† H. Rendu‡‡

I could swell this list considerably, but I believe that the facts mentioned are quite sufficient to establish that *sometimes, when there are lesions of unequal extent in the two halves of the brain, a paralysis will appear in the limbs on the same side where the lesions are most extensive.* In most of the cases of that kind that I have collected, each of the two lesions was perfectly able to produce a paralysis, so that, according to the old views about the origin of that symptom there should have been almost always paralysis on the two sides instead of only a unilateral one. Still more, *if we suppose that it was the greatest lesion that produced the paralysis, it should invariably have appeared on the side opposite to that of its location, and such was not what occurred. If, to make matters agree with the old views, we suppose that it was the smallest lesion that produced the paralysis, we are then in presence of facts showing a considerable alteration of parts considered as motor centres or parts of the pretended tract of conductors for voluntary movements, without the appearance of paralysis. It is clear, therefore, that those facts are in complete disagreement with the admitted views, while they are easily explained if we admit the views I hold.*

Clinical Lecture
ON A
CASE OF SUCCESSFUL LIGATURE OF BOTH EXTERNAL ILIACS FOR INGUINAL ANEURISMS.

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GENTLEMEN,—I have the pleasure of calling your attention this morning to a very rare occurrence in surgery—namely, the successful ligature of both external iliacs for inguinal aneurisms. The patient is the same Thos. M'C——whom I introduced to your notice at the beginning of the present session. I then described to you the history and results of ligature of the *left* iliac for inguinal aneurism, performed by me on the 1st May, 1875 ‖‖ I now show you the man cured of aneurism of the right common femoral by ligature of the *right* iliac artery, which I performed in your presence on the 19th January, 1876; that is, eight months and nineteen days after the previous operation. In Mr. Erichsen's "Surgery" you will find reference made to a similar case, in which Mr. Tait tied both iliacs successfully, at an interval of eleven months between the operations. I do not know of any other such case on record.

After the first operation M'C—— remained quite well, and was able to resume his work as a shoemaker; but on the 17th November, 1875, he returned to the hospital complaining of violent headache, or rather of a violent pain on the right side of the head, said to be quite of a peculiar nature. Ordinary remedies had no effect on this pain, and I began to wonder if it could be due to some intracranial aneurism. I did not, however, make out any bruit; and as the man had once had syphilis, I put him upon full doses

* Association Journal, 1863, p. 554.
† Quoted by Gintrac, loc. cit., vi., p. 367.
‡ Bulletins de la Soc. Anatom., 1860, p. 443.
§ Medico-Chirurgical Transactions, vol. xix., p. 367.

* Archives Gén. de Médecine, &c., 1828, vol. xiv., p. 18.
† Bulletins de la Soc. Anatom, vol. xxxii., 1857, p. 246.
‡ Traité des Maladies du Cerveau. Paris, 1826. p. 309.
§ Lettres sur l'Encéphale, vol. iii., p. 170.
‖ Gazette Médicale de Paris, 1836, p. 483.
¶ Bull. Soc. Anat., 1834, p. 136.
** On Apoplexy, p. 125.
†† Quoted by Gintrac, loc. cit., vii., p. 83.
‡‡ Reck. Cliniq. et Anatom. sur les Paralysies, &c. Paris, 1874. p. 109. I mention this case as a specimen of superficial lesion of the two sides of the brain.
‖‖ See THE LANCET of Jan. 15th, 1876.

of iodide of potass, on the theory that the headache might be periostitic in its origin. Soon afterwards the pain rather suddenly ceased, and the man declared himself quite well on the 24th November.

Nevertheless, he remained in the hospital, chiefly because I wished to show him to you, and to the Medico-Chirurgical Society of Glasgow. As before, he made himself very useful in the wards, but was not allowed to do any heavy work. It was only on the 27th of December last that he told me in passing through the wards that there was an unusual beating in his right groin, as if he had another aneurism there, and on examination such turned out to be the truth. The tumour was in the site of the common femoral, just under Poupart's ligament, as large as a walnut, pulsating freely in all directions, and yielding a loud aneurismal bruit when listened to with the stethoscope. I immediately ordered rest in bed, and compression only with a sand-bag, because of the tenderness of a gland which was situated close to the aneurism.

Unfortunately the patient could not endure any form of pressure. I tried the abdominal compressor in several positions above the aneurism, and Signoroni's tourniquet further down. I even applied Carte's circular tourniquet below the aneurism, and on the tumour itself, but all to no purpose, and the man himself begged me to tie the vessel, as I had done before, on the other side. By this time the aneurism had considerably increased in size, and now measured three inches in length. The bruit was very loud, and a grating sensation was communicated to the hand when laid on the tumour, just as if the blood-current was displacing coagula in the sac as it passed through. A consultation of the surgical staff of the hospital agreed with me that ligature of the right external iliac should now be performed, and therefore, having put the man on low diet for a few days, and gently opened his bowels, I performed the operation on the 10th of January.

The limb was carefully wrapped in cotton-wool and flannel, and chloroform was administered, but he went under its influence with difficulty, had frequent attacks of retching and coughing, and occasionally during the operation came partially out of the anæsthetic stupor. His condition, therefore, was not such as made the operation easy, and it also happened that, after making the ordinary incisions through the skin, aponeurosis, and muscles, I found it very difficult to separate the transversalis fascia from the peritoneum; in fact, I punctured the latter in scratching through the fascia, the unsteadiness of the patient and his not being thoroughly under the chloroform at that moment having much to do with this error. However, immediately recognising the mishap, I closed the puncture with a single stitch of catgut, and proceeded with the operation, which I speedily completed without further difficulty. I dare say that the trial of compression on this side served to condense the areolar tissue, which is usually found loose and easily torn between the transversalis fascia and the peritoneum. The pulsation in the aneurism was at once arrested, and never for a moment returned. Its size was also greatly diminished on the ligature being tightened. I ought to mention here that the ligature was of silk, prepared as before by being drawn through melted wax and carbolic acid. It was cut short at the knot, and after the carbolic spray had been freely used, the wound was closed with stitches of silver wire, a drainage-tube of oil-silk having been inserted at the upper extremity. Next day I removed the dressings and extracted the drainage-tube, as there was no discharge at all, and not the least tenderness on pressure. There was, however, considerable flatulent distension of the abdomen, constant sickness, and occasional vomiting. His pulse was 72 and his temperature 99°. I ordered him a calomel-and-opium pill twice during the day, and one of colocynth and henbane at night. Nevertheless he continued to vomit frequently until next day, when his bowels were freely relieved by an enema. The abdominal distension at once disappeared, and, in fact, he was quite well.

He was kept on mild, soft diet, and had no bad symptom after the second day—in fact, after he recovered from what I believe was a bilious attack, increased by the effects of the chloroform, which evidently disagreed with him both at the time of its administration and afterwards. The wound was frequently dressed, and healed rapidly without suppuration. By the 10th of February it had completely cicatrised, and the dressings were discontinued.

Six days after the operation it is noted in the journal that the blood in the aneurismal sac felt quite solid, and by the time the wound was healed its size had greatly diminished. It is now represented by a small hard mass, of a flattened form, underneath Poupart's ligament.

The patient's diet was improved, and he was allowed to sit up in bed. In doing so he seemed to have bruised or irritated a gland in the iliac region outside of the cicatrix, and it was painful for a day, but a poultice soothed the pain, and the swelling very soon entirely disappeared.

Almost all restrictions were now removed, and the patient is reported on March 4th as being out of bed most of the day. It will be noticed that in this case the wound was firmly cicatrised in twenty-two days, and the patient was well and out of bed in six weeks from the date of the operation.

I am glad to be able to show you this man to-day (7th of June), nearly six months after the second operation was performed. He has been quite well since then, and only now complains of weakness of the abdominal parietes, where the incisions were made, and where you saw a considerable bulging when he coughed. I believe that a double truss with large and flat heads will be the best remedy for this state of parts.

I also beg you to note that there is no fulness or tenderness in the site of either ligature. In both iliac regions the parts seem to be quite healthy, with the exception of the obliteration of the arteries there, which is complete.

This case therefore proves that prepared silk ligatures may be applied on the continuity of an artery, and neither cut it nor produce suppuration, for both of these ligatures still remain, I believe, around the iliac arteries where I placed them, the one thirteen months, the other six months ago. As to the exact state of these ligatures, the best information I can give you is the following:—On the 15th of last January I assisted the late Dr. Dewar to tie the femoral artery with a silk ligature prepared as mine were. Unfortunately the patient, who was an old man and otherwise ill at the time of the operation, only lived for twenty-four hours. I examined the artery and the ligature carefully after death, and found that the latter had ruptured the internal and part of the middle coats of the former, the rest of the arterial wall remaining sound. The parts of the coat which had been ruptured were turned in towards the centre of the tube, and glued with lymph and clot. The ligature was buried in lymph, and, on cross section was seen to be already intruded into by the cellular elements. I have little doubt that its fibres would have soon been further separated and encapsuled by the lymph, and thus preserved from change. Such I believe to be the state of the ligatures in my case. They are still holding the arteries, but they are, by this time, so incorporated with living tissue that they may continue there indefinitely, without causing any disturbance or irritation.

At the time when this man's case was interesting us all—namely, last winter—I made some experiments upon the durability of catgut ligatures in the living body. More perfect ones might easily be devised, and I may yet pursue the subject further; but in the meantime I shall give you the results we arrived at.

EXP. 1.—Three catgut ligatures, prepared as usual for surgical purposes and of different thicknesses, were tightly tied round a piece of wood and immersed in blood freshly drawn from a man's arm. In twenty-four hours' time no appreciable change in the ligatures had taken place. The knots on the ligatures were quite firm, and the ligatures themselves were not thinned. My notes do not contain any indication of a later inspection of the ligatures.

EXP. 2.—Three similar catgut ligatures were employed, and a double knot was firmly tied on each. They were then pulled through a sinus in a man's leg, as a seton, so that the knots were embraced by the tissues and bathed in the sero-purulent discharge of the sinus. In six hours there was no appreciable difference in any of them. But in thirteen hours the ligature of smallest size had entirely liquefied and disappeared. That of medium size had become soft and diminished in thickness, so that the knot slipped on being slightly pulled; in fact, the ligature actually broke on slight traction being made on it. The third ligature, which was of the thickest catgut used in surgery, had also very much thinned; the knot on it slipped readily, but it did not break.

EXP. 3.—Again three catgut ligatures, similar in all respects to those previously used, after having been knotted, were inserted in an abscess recently opened. In six hours the catgut was bleached, but not otherwise changed. In thirteen hours the ligature of smallest size was softened, and the knot did not hold, while the others were unaffected; but after twenty-four hours' residence in the pus, all were found softened, thinned, and incapable of retaining the knot.

I ought to have stated that in Exps. 2 and 3 antiseptic dressings were employed, and in neither case was the pus at all putrid.

The question now comes to be whether or not the time—less than thirteen hours—is long enough to hold an artery with a ligature for the cure of aneurism; and the practical answer which must be given is that in *some* cases it would seem to have been long enough, while in others it was not. My experiments would seem to show that if suppuration is entirely prevented, the catgut ligature will hold for twenty-four hours, or perhaps even longer; but as no surgeon can be certain of securing that condition, especially in deep wounds and in unhealthy patients, the propriety of employing catgut ligatures in such cases is rendered doubtful; whereas the successful case of ligature of both internal iliacs now before you goes far to prove the safety and the certainty of prepared silk ligatures in such cases, and the length of time which has elapsed since the operations greatly strengthens this conclusion.

THE SPHYGMOGRAPH IN MEDICINE.

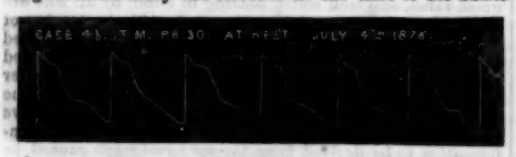
OBSERVATIONS ON THE TRACINGS FURNISHED BY MANY CASES OF DOUBLE AORTIC MURMUR.

BY C. HANDFIELD JONES, M.B. CANTAB., F.R.S.,
PHYSICIAN TO ST. MARY'S HOSPITAL.

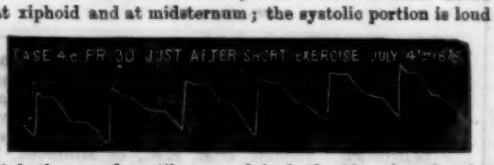
(*Concluded from page* 184.)

CASE 4. *Double aortic murmur; some cardiac hypertrophy; tortuous and visibly pulsating temporal artery; flat-topped tracings; pallor; anasarca.*—T. M——, aged seventeen, van-boy on the Great Western Railway, admitted June 23rd, 1876. Had rheumatic fever badly when he was quite young. Was taken ill fourteen days ago with pains in back, arms,

and abdomen; they are now felt in the legs, knees, and right arm. Is pallid. Pulse 88, jerking, not small or empty. Temperature 103°. Right temporal artery was seen pulsating most markedly and tortuous at the time of his admis-



sion; when he was quiet in bed it was less visible. Heart's apex beats at and a little outside the fifth left space; dulness area a little increased to left; loud double murmur heard at xiphoid and at midsternum; the systolic portion is loud



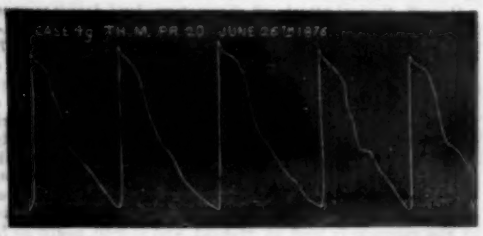
at both second cartilages and in both sides of neck; the diastolic is weak at upper sternum. No mitral murmur. Fairly good breathing at both backs. At the sternal notch a distinct pulsation is felt, but it is not certain whether it proceeds from the dilated aortic arch or from the large vessels of the neck. Sometimes a thrill is felt in this situation. He was ordered ten grains of salicylic acid every two hours. The temperature fell by the 24th to 100·4°, and by

the next day to 98·4°. By the 26th the rheumatism had disappeared; the heart sounds were as before. The salicylic acid was taken every four hours after the first day; fifteen grains of potassio-tartrate of iron and fifteen minims of tincture of calumba being substituted for it on the 26th.

On July 3rd he was up and about, but was very pale, and both feet were notably anasarcous.—6th: Specific gravity of urine 1022; not albuminous.

This case was undoubtedly one of valve-lesion from rheumatic endocarditis; there cannot be any suspicion of arterial degeneration or of anæmia. With regard to the tracings, those which I have figured and several others, taken at very different pressures, all agree in exhibiting

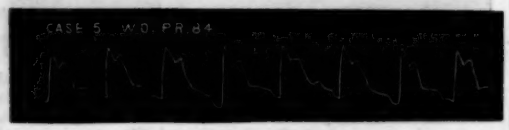
signs of increased arterial tension. The effect of gentle exercise—walking a few minutes in the ward—as compared with repose was decidedly to increase the degree of arterial tension, as might be expected from the action of the heart being increased. The height of tracing (*g*) shows how



dilatable the arteries were. The contrast between (*e*) elevation and (*f*) depression of arm is quite similar to that in Case 3, and the same remarks are applicable to both. During elevation both tracings retain their tension-signs, though perhaps attenuated. The tracings on the right of (*e*) should be compared with those on the left by those who regard narrow peaks as produced by jerking of the lever away from the knife-edge (inertia), and not by true elevation from distension. If the four tracings on the right cannot be ascribed to inertia, why should the six on the left be?

CASE 5. *Double murmur at midsternum, systolic in left side; radial pulses visible; dropsy; bronchitis; albuminuria; previous attack of gout; autopsy showed considerable lesion of aortic valves, hypertrophy of heart, sound kidneys.*—W. O——, aged forty, labourer, admitted October 3rd. Was in good health up to August 10th, then got bad cough, and his breath became very short. No expectoration. Lower limbs and scrotum greatly swollen. Urine contains some albumen

and tube casts. Fine crepitant râles are heard over both lower backs; in left the breath-sound is weak. At midsternum a double murmur is heard, both systolic and diastolic portions being well marked over right third cartilage, over left the diastolic only. Up near the right clavicle the systolic portion is well heard, down near the xiphoid the diastolic. At left side, outside the nipple line, there is a loud systolic murmur. Radial pulses visible. Tracing shows marked delay of tidal wave. He has had gout in his feet two or

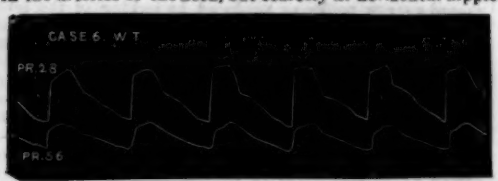


three times; never had rheumatic fever. By November 2nd the anasarca had so much increased that—the urine being scanty—a small incision was made in front of each external malleolus, from which, in two days, about 140 oz. of fluid escaped; 70 oz. were collected in the first five hours. The breathing was relieved, but erysipelas came on; the temperature rose to 103·3°, and he died November 11th. The urine, four days before death, was albuminous, but free and clear.

Autopsy.—Both lungs much engorged, otherwise healthy. Heart weighed 21 oz.; its muscular fibre was of a good red colour; the left ventricle walls were thickened, and its cavity enlarged. Mitral orifice a little enlarged, about half an inch, the valve flaps healthy. Aortic valve much diseased, the flaps thickened and shrunken, two of them fused together. Right ventricle somewhat dilated, the tricuspid orifice very much so, its valve and the pulmonary normal. Kidneys appeared quite normal, and all the other organs. The left leg was swollen, and an incision made about the calf showed the areolar tissue completely infiltrated with puriform matter.

Here the results of dissection were conformable to the physical signs, except that the kidneys appeared to be more healthy than the state of the urine might have led one to expect. Probably the albuminuria depended solely on venous congestion. The delay of the tidal or predicrotic wave shown in the tracing indicates, of course, increased arterial tension, rigidity of the radial wall being improbable at the age of forty. That such a state should have existed with both aortic and mitral incompetence would hardly have been anticipated. The result of the incisions would have been decidedly good but for the supervention of erysipelas. (More tracings should have been taken with different pressures, but I do not think that they would have shown essentially different features.)

CASE 6. *Several attacks of rheumatism, loud double murmur at midsternum; marked flat-topped tracing; no albuminuria.*—W.T——, aged forty-five, cab-driver, admitted Oct. 4th, 1873. Ill fourteen days with pains in joints; copious sweating at night; pains in front of chest and in precordial region. Appetite lost, thirsty. Temperature 99°; pulse 90, of tolerable volume. Was ill in same way before last April, and in October, 1872. Dulness in area of heart not increased; impulse visible and felt in epigastrium, less distinct at fifth space below nipple. At midsternum a loud rough double murmur heard up to right clavicle, and also, but weaker, at left second cartilage. The diastolic portion of the murmur is loud at xiphoid, and is well heard as far as left vertical line, but beyond this becomes feeble, and is hardly heard in the left side, and not at all in the back or at lower angle of scapula. The diastolic murmur is a large blowing sound. No second sound heard at midsternum and xiphoid. The systolic portion of the murmur is heard in the arteries of the neck, but scarcely at horizontal nipple



line, or at vertical in fifth space. Tracings taken October 8th, most ample with pressure 28 grammes; the rise is high and vertical, the top flat or sloping upward, the fall shows but slight dicrotism. Breathing fairly good in both lungs. The radial pulse was not easily visible unless the forearm was extended. No mention is made of the existence of any dropsy. The disorder was evidently mild articular rheumatism, which subsided, and he left the hospital November 27th. Urine examined October 10th and 13th; was not albuminous, sp. gr. 1012, 1013.

There can be no doubt in this instance that the aortic valves were deformed by rheumatic endocarditis, and rendered incompetent to close the orifice, and that this incompetence was more than slight. Yet the tracing is that of Bright's disease, or some other state producing great increase of arterial tension, and it is not materially altered by change of pressure.

CASE 7. *Old-standing cardiac disease; heart hypertrophied and dilated; mitral and aortic systolic murmurs; anasarca; orthopnœa; urine not albuminous.*—M. M——. Ill for many years with short breath and heart complaint. Three years ago had rheumatic fever for the fourth time, and ever since then her heart disease has been aggravated. Has been unable to lie down for some months; if she does, pain takes her under the scapula, and she has to fight for her breath. Her legs have been very much swelled. Pulse large, compressible, 96. Both backs well resonant; crepitations heard in all left, less marked in right. She coughs and spits a good deal. Heart's impulse extensive, felt at epigastrium, in precordia, a little outside nipple line, and as low as sixth space. Dulness area increased to left. Below nipple in left side, at midsternum, at right and left sterno-clavicular articulations, and less loudly in the arteries of the neck, a loud, blowing, systolic murmur is heard. It was also heard plainly at the xiphoid, but was not so loud there as at midsternum. Its maximum intensity was at the apex in left side. Radial pulse very superficial, just visible. Urine in fair quantity, not albuminous. Tracing on the 17th April shows a low rise, a broad sloping top, a gradual fall, with little dicrotism.

There can hardly be any doubt that two murmurs existed in this case: one, that of mitral regurgitation; the other, that of aortic obstruction. The former condition probably did not affect the form of the tracing materially; I have not found it to do so when existing alone. The latter, by impeding the flow of blood into the aorta, produced the low primary rise and the marked delay of the tidal wave. I have added this case to the others—from which of course it materially differs—to show in what way obstruction tends to modify the tracing.

If these observations should be confirmed by others the sphygmograph may be used to distinguish between cases of double aortic murmur more exactly, showing when obstruction predominates, and when regurgitation. I close with a quotation from Dr. Galabin's paper, which seems to me of great value, and well worth bearing in mind by all who are engaged in these inquiries—viz., that, "If the tracing of any pulse taken at a low pressure shows a very marked primary summit, whose proportionate magnitude is modified by increase of pressure, then the tracing taken at the higher pressure more closely represents the true pulse wave. The form of tracing at the lower pressure may, however, have much significance, and in these cases the whole of the information to be derived from the sphygmograph cannot be compressed into any one curve, but requires at least two for its expression—namely, that trace which has the greatest amplitude, and another taken at a high pressure."*

* Loc. cit., p. 306.

BEQUESTS TO MEDICAL CHARITIES.—Sir James Lomax Bardsley, M.D., bequeathed £500 to the British Medical Benevolent Fund; £500 to the Royal Medical Benevolent College, Epsom; £500 to the Manchester Royal Infirmary and Dispensary; and £200 to the Manchester Ear Institution. Captain Bold, R.N., of Millbrook, bequeathed £1000 to the Royal Hants County Hospital, Winchester.

ON THE TREATMENT OF DEFECTIVE UTERINE INVOLUTION.

BY EDWARD JOHN TILT, M.D.

IF it was right to consider defective uterine involution as, to a great extent, *the workshop of uterine pathology*, the matter in hand is important, for there is evident danger of some disease setting up, in a womb that remains much larger than it ought to be several months after delivery.

There is firstly to be considered the right performance of what should be a natural function; so pregnancy and labour should be managed in order to ensure the maintenance of sufficient reserve-force when the system shall be called upon to reconstruct the womb; and I think Dr. Bassett* is right in urging that many women want more medical treatment than they usually get during pregnancy—that they want tonics, and, above all, iron. It is also clear that whatever prolongs labour and exhausts strength augments the chances of defective involution. It is, moreover, fair to conclude that too long-continued contraction of the uterine muscle leaves it half paralysed after delivery, and that its overstrained muscular fibres can no more properly contract, than can the muscular fibres of the over-distended bladder after the urine is removed. I therefore look on the present tendency to shorten labour by instrumental interference, so soon as it can be safely done, as well calculated to prevent involution becoming defective. Those who object to medical treatment during pregnancy, and to the expediting of labour, on the plea of interference with natural functions, should bear in mind that we have to do with women considerably modified by hereditary tendencies, and by the bad hygienic habits that always wait on a high state of civilisation. Some of the women we attend have never done a hard day's work till labour pains set in.

The giving a full dose of ergot as the head emerges, and Credé's method of removing the placenta, tends to prevent post-partum hæmorrhage, and gives the womb a proper shape, by making its muscular fibres fully contract in the right direction; for however firmly it may at first contract, the womb soon relaxes; for it is in the midst of the fast-decaying elements of worn-out muscular tissue, that a new womb is built up, just as in dissolving views we see new forms arise in the very midst of structures that rapidly melt away. It can therefore be of no use to apply firm pressure to the womb after the first few hours of delivery, and a bandage then should have no other object than to give the abdominal viscera that support they cannot get from relaxed abdominal walls. Should there be a previous history of some uterine distortion, attention should be given to the patient's posture in bed. She should be told to lie as much as possible on her back if the womb had previously been anteverted or anteflexed; and, on the contrary, to lie as much as possible on the face and stomach if, as is more frequently the case, the womb had been retroverted or retroflexed. Are we right in scrupulously keeping women on their backs for nine days after confinement? Would not the gentle pressure of the enlarged womb by conterminous organs, supported by the varied play of the abdominal muscles, not only prevent the stagnation of decomposing fluids within the womb, but give it a better chance of growing to a proper shape and size than it does under the plan generally adopted in the treatment of puerperality? I think it likely, considering the good results obtained by Dr. Goodall in the treatment of 700 women at the Preston Retreat, near Philadelphia; and a good idea of the institution, and of the practice there followed out, may be gathered from the following extract taken from Dr. Goodall's pamphlet:—

"The institution contains twenty beds, divided amongst four wards, five in each ward. The cubic capacity is about 1800 feet for each bed. About one hundred married women are delivered yearly. They are admitted, on an average, about sixteen days previously to confinement, and allowed to stay a month; they, however, generally only remain about eighteen days. The air admitted into the rooms is heated in the basement, and ventilation is maintained by a small jet of gas in the old-fashioned fireplace. Outside the hospital, puerperal fever was rife of late years. In Philadelphia and the city of New York, the mortality from puerperal causes (acknowledged as such) has been as high as one in forty-five, amongst all classes alike; if anything, more amongst the wealthier. The wards are used in rotation, one always being kept vacant for about two or three weeks. When a ward is emptied, the doors and windows are kept constantly opened until it is used again, and the whole of the walls, beds, furniture, and floors are scrubbed down with carbolised soap, and then mopped over with a weak solution of carbolic acid. No water is allowed to be used to the floors until the ward is emptied again. The nurses belonging to the ward go off duty for a week when it is closed, and go through a thorough system of purification. The beds are of straw, which are changed with each patient, the blankets and bedclothes being boiled in water with a small quantity of carbolic acid added. The feathers of the pillows and bolsters are only baked once a year, unless they should become soiled or have been used by a patient whose convalescence has been retarded. Every woman has a bath at least once a week before delivery. Any indication of enfeebled health is at once treated with quinine, steel, and phosphoric acid. Headaches and sleeplessness are dealt with by warm baths and large doses of bromide of potassium. The bowels are kept relaxed and purged. As soon as labour begins, the patient is placed in a warm bath. The membranes are generally ruptured artificially. The second stage is never allowed to be prolonged, the forceps or vectis being used. ..... Ergot is not given as an oxytocic, but as soon as the head comes to press on the perineum, a drachm is given. Should the perineum be torn, it is sewn up at once with silver sutures. A cylindrical compress is applied just above the fundus, and a tight binder applied for twelve hours, when it is removed, and not used again. The patients are confined on a delivery-bed, and wheeled into the ward and removed to their beds. In not a single instance has flooding ever been caused by this muscular movement; if anything, it has rather tended to excite uterine contraction than otherwise. The next day after delivery the woman slips out and sits in a chair whilst her bed is made; this is repeated once or twice a day until the fourth or fifth day, at which time she may get up, dress herself, and do what she likes. No patient is forced to leave her bed, but the force of example is so great that most do. After-pains are immediately removed by quarter-grain doses of morphia, given every hour until relief is obtained. If they be very obstinate, ten grains of quinine are given every six hours until the ears ring. It is an invaluable remedy in these cases. There are no bed-pans; vaginal injections are employed. Every woman washes herself daily with carbolised soap and a pad of fine oakum. No nurse, except for some special reason, is ever allowed to wash the woman's person. If the lochia be offensive, she is taken out of bed more frequently, and placed on the chair. Should this not succeed, a vaginal injection is then used."

There is a strong presumption in favour of the belief that suckling has for one of its secondary purposes to stimulate the womb while in a transition state of structure. I have long ago confirmed Aran's assertion respecting the frequency of uterine disease in those who do not suckle, and this may be partly owing to defective involution in such women. Since I wrote on the subject, both Schroeder and Schneider aver that suckling promotes involution, and Serdukoff has satisfied himself that up to the first week of puerperality involution proceeds more rapidly in those who nurse than in those who do not. I am therefore among those who think the accoucheur should not leave the house without having seen the child applied to the mother's breast. Besides favouring involution by the singularly powerful effect of mammary irritation on the ovaries and womb, suckling also checks menstruation, and a few months' rest from menstrual congestion enables the womb to better recover its right size. The child will of course have to be weaned if he cannot thrive on the maternal milk; and, on the other hand, should the cervix be much ulcerated, suckling is very likely to prevent its cure by the usual surgical treatment, in which case also the child should be weaned.

What precedes relates to the prevention of defective involution. I pass over the most interesting part that it

* Transactions of the Obstetrical Society of London, vol. xvi.

takes, during the first fortnight of puerperality, in the production of hæmorrhage, in the retention of decomposed fluids, in the production of puerperal metritis, lymphangitis, phlebitis, and fever, to direct attention to sundry morbid states that are to be observed a little later, that check involution by bringing on what is commonly called "a bad *getting up*."

There is always considerable debility caused either by length of labour, loss of blood, or nervous shock—debility requiring iron and quinine as well as wine and food. Everybody admits this requirement, and meets it more or less judiciously; but puerperal traumatism is little understood, and often completely unsuspected as the cause of a bad getting-up.

If a woman dies within forty-eight hours after delivery, the tissues of the womb will be found as black as ink. This bruising of the womb, the vagina, and subjacent tissue, is generally cured by nature; not so the fissures and rents of the cervix, simple or stellated, in weak and unhealthy subjects. I have already mentioned their frequency as admitted by the late Dr. Phillips and Dr. Atthill of Dublin; and the more frequent use of the forceps now advocated by the best men will inevitably increase the number of such lesions; for some will use instruments without being thoroughly up to their management, and others will not always wait to use them till the os uteri is fully expanded. Thirty years of practice have made me certain of one thing—that each of these rents that refuse to heal of themselves may, by checking involution and in other ways, be the starting-point of long years of uterine disease, often characterised by considerable uterine enlargement and hardness. With this conviction, I may be permitted to view with dismay any theory that would treat lengthily of uterine hardness and enlargement, in women who have borne children, and which did not take into consideration the frequent origin of such states in traumatic lesions of the cervix.

To check such lesions in their earliest stage, the best way is, after every case of labour, to suppose the existence of traumatism in the cervix and vagina, and to order vaginal injections to be made so soon as the lochia should cease to be red. I know of no better injection than a solution of acetate of lead, one drachm to the pint of tepid water. There is no likelihood of such an injection entering the uterus, and the chance of the occurrence of the uterine tormina that occasionally follow the use of injections, or the chance of some accidental awkwardness in the use of the instrument, is as nothing compared to the benefits generally derived from the practice. I recommend the practice as a matter of routine, without any previous examination of the patient, as not calculated to do harm, even if it be not wanted. If, three of four weeks after confinement, a bad getting up is notable for a vaginal discharge, bloody or muco-purulent, the patient should be carefully examined, and it will be found that uterine involution is being checked by some more serious lesion than congestion or subacute inflammation of the cervical mucous membranes. I refer to my Handbook of Uterine Therapeutics for the treatment of the chronic inflammatory lesions that grow out of puerperal traumatism.

The somewhat independent life and pathology of the neck and of the body of the womb is sometimes shown in the process of uterine involution, for the cervix may have nearly recovered its normal size and consistency, while the body may still remain large and flabby. Thus a large soft bag, being poised on a cervix already stiffened to its usual consistency, is ready to yield to the laws of gravitation and to bend at their point of junction in obedience to slight pressure. This is a very satisfactory explanation of post-partum flexions and versions, and it holds good to a great extent for those that follow abortion.

To explain these occurrences in the virgin womb, there is the over-weighting of the body of the womb, by repeated attacks of insufficiently relieved congestion or of inflammation, and in other cases the congenital imperfection of some part of the womb or of its ligaments; for, with regard to any considerable amount of softening of the virgin womb, in delicate young women, which has been lately asserted to be of not unfrequent occurrence, Dr. Henry Bennet, and some other gynæcologists to whom I have spoken on the subject, are like me in not having met with such a condition. It follows from what I have stated of the possible separate rate of involution of the cervix and of the body of the womb, that, supposing a considerable amount of cervical ulceration be found two or three months after parturition, this should not be taken as the sole lesion, for involution may be defective in the body of the womb, albeit complete in the cervix. There is no better way of promoting involution in such a case than by properly treating the cervical inflammation, and I have already related a case in which the gradual involution of both body and cervix was brought about by the application of a strong solution of nitrate of silver, the cervix being without lesion. When the womb is found much too large several months after confinement and without cervical lesions, I order a ten-grain mercurial suppository to be put up the vagina, on going to bed, for the first fortnight, and afterwards on alternate nights, for two or three weeks, telling the patient to inject plain water in the morning, and a solution of alum and zinc at night. The exhibition of the mercury should be stopped if the gums show signs of impending salivation. In all cases of defective involution, with or without cervical inflammation, I give the usual doses of iron and strychnia, to act on the womb through the system, and also ergot, although it is difficult to understand that it can act as well on the womb in a state of mutation as on the uterus in its ordinary state of nutrition-stability. When the womb is found large enough to admit a bougie to the depth of about four inches, and when this enlargement can be traced to a delivery that occurred a year or more previously, it is fair to attribute this enlargement to defective involution, but its treatment merges into that of one or more complications that will have certainly arisen in that time—displacements, internal metritis, hypertrophy, or chronic inflammation of both body and neck of the womb. I shall say nothing of the treatment of such complicated cases, except that when defective involution is associated with an enlarged and hard cervix, lined with a diseased mucous membrane, nothing is better calculated to reduce the size of both the body and of the neck of the womb than an issue made in the most accessible part of the cervix, by means of potassa fusa cum calce, the wound being freely swabbed with tincture of iron on alternate days for the following month. There should be no surgical treatment for the following three months, after which a second application of potassa fusa cum calce is often advisable.

Notwithstanding Dr. Serdukoff's assertion, the rate of uterine involution after pregnancy, at full term, can only be roughly guessed at, for the hand has to measure the womb through abdominal walls of variable degrees of thickness and laxity; but we know positively nothing respecting the rate of uterine involution after abortion, and it would be well if the structure of the uterine walls were examined with the microscope when women die after abortion in our hospitals. From the great frequency of uterine disease after abortion, and from the fact of its being contrary to order that the womb should be called upon to undergo fatty degeneration, unless after pregnancy, at full term, it is presumable that the two facts are related as cause and effect. Defective involution is probably the reason why one abortion is so often followed by others, the uterine walls refusing to properly expand for the safe guardianship of the fœtus, whereas, if the body of the womb be healthy, pregnancy will often proceed satisfactorily, in spite of serious cervical inflammatory lesions. It is, of course, still possible for pregnancy to be brought to a satisfactory issue under the most unfavourable circumstances; for, in a case now under observation, the cervix was extensively torn in a first labour eighteen years ago, and abortion was repeated seven times consecutively. An enlarged body, as well as a considerable amount of cervical enlargement and inflammation, was recognised some years ago by Dr. George Bird, but the treatment he recommended was not carried out. From the symptoms complained of previous to the eighth conception, it is clear that the uterine disease had not abated, and yet this lady went her full time and was safely delivered of a fine boy. During the following four years she did not conceive, long periods of aggravated dysmenorrhœa and menorrhagia being separated by ten days of miserable health. I found the body of the womb about three times its usual size, the cervix similarly enlarged, very hard and sensitive, the os uteri irregularly shaped, and its mucous membrane of a dusky red.

To prevent the defective involution that follows abortion, this should be treated like an acute disease of the womb.

The patient should rest in bed, so long as pelvic pains are severe, and warm linseed-meal poultices should be applied to the abdomen. Linseed-tea or poppy-head injections are very useful during the first week, and then injections made by adding a drachm of laudanum and of acetate of lead to a pint of tepid water, twice a day. When the patient resumes her usual mode of life, if there be back pain or bearing-down pains on slight exertion, a vaginal discharge, staining the linen yellow, and debility in spite of tonic treatment, then the patient should be examined, and surgical applications should be made to the ulcerated cervix. Involution is so often defective after abortion because women get about too soon, and too soon resume matrimonial intercourse, and the want of some definite understanding respecting the rules to be adopted after abortion renders it a fertile source of disease. Much of this would be prevented if we could persuade the public that a month's treatment is not too much for an ordinary miscarriage at the third or fourth month, and that a bad miscarriage is worse than a confinement.

It is fair to promise a woman that defective uterine involution, become permanent, may be cured by a subsequent pregnancy. I have seen cases, and others are on record, in which uterine fibroids of considerable size have been softened and swept away by the flood-tide of pelvic circulation that characterises pregnancy and puerperality; so it is easy to understand that tissues, by defective involution long made permanently too hard, may soften, allow of a perfect pregnancy and of the subsequent building up of a new womb after a better model. I have seen instances of this and other cases in which, by a judicious management of puerperality, the womb assumed its proper shape instead of being extensively retroverted, as it had previously been for years.

Seymour-street, Great Cumberland-place.

NOTES
ON
SOME PATHOLOGICAL FEATURES OF STRANGULATED HERNIA,

ESPECIALLY WITH REFERENCE TO THE CAUSE OF DEATH, AND TO AN EXPLANATION OF SO-CALLED STRANGULATED OMENTUM.

BY RUSHTON PARKER, F.R.C.S., M.B.,

PATHOLOGIST TO THE ROYAL INFIRMARY, SURGEON TO THE STANLEY HOSPITAL, LIVERPOOL.

A REVIEW of some of the cases of patients who have died after strangulated hernia, in which I have examined the post-mortem appearances, and of other cases which I have recently seen, brings with it an answer, more or less satisfactory, to the following questions:—1. Are the anatomical appearances adequate to account for persistence of the symptoms of strangulation, and so for death? and if so, what explanation must be placed upon them? 2. Is strangulated omentum alone, as such, to be accepted as a form of strangulated hernia?

Three of these cases have occurred in the Liverpool Infirmary; two I have had access to in the practice of other professional friends in the town. To all these gentlemen I am indebted for permission to make use of their materials. The only case that recovered was one of the last two, and is introduced here as illustrating a point to which another case pointedly alludes. A sixth case occurred in my own hospital practice.

CASE 1.—A man, aged thirty-nine, with left inguinal and scrotal hernia of thirty years' standing, formerly all reducible, latterly not. On Nov. 9th strangulation, reduction in infirmary by taxis after twelve hours; omentum left in sac; uncertainty whether any bowel yet remained. Symptoms returned. Herniotomy by Mr. Harrison after two days, sac being opened; no gut found; much omentum reduced; some left in sac fixed by fibrous adhesions. Death in thirty-six hours. The post-mortem examination revealed sticky peritonitis; transverse colon dragged tightly down to the level of the umbilicus by omentum; above this point intestines distended, below contracted; bit of ileum near lower end, showing where it had been strangulated, dark purple, probably recoverable, lying near internal ring.

CASE 2.—A man, aged sixty-four, with a left inguinal hernia of a few weeks' standing, strangulated a couple of days. Herniotomy, at the infirmary, by Mr. Harrison; sac not opened, and the bowel reduced by simply holding up the sac, the neck of which had been bent on itself. There was no stricture. Symptoms returned in twenty-four hours, and death took place in four days. The post-mortem examination revealed sticky peritonitis and moderate distension above the piece of ileum which had been implicated, and which was eight feet from lower end; the end of the omentum was lying loosely in the sac, and was easily withdrawn. No narrowness of sac's neck.

Why did these cases die? All direct cause of strangulation had been removed, but what maintained the symptoms? It would seem that the injured bowel, becoming adherent by peritoneal lymph to the adjacent wall or viscus, and its muscular coat having become paralysed above the strangulated portion, an amount of obstruction was effected which would, under ordinary circumstances, be impracticable. Mr. Bryant* refers to a case which, in several points, resembles Case 1, and in which obstruction of the transverse colon and symptoms of strangulation were kept up by adhesion and traction of omentum. I am disposed to regard the very slightest adhesion and folding of a previously strangulated bowel as capable of effecting fatal obstruction when combined with paralysis of the muscular coat above. This last feature is referred to by Sir James Paget in his Clinical Lectures, 1872. This is also the explanation I have to offer in the following unsuccessful instance.

CASE 3.—In March, 1875, a woman, aged fifty-five, was admitted into the Stanley Hospital, suffering from a right femoral hernia of four days' duration, during which time she had suffered from symptoms of strangulation. I performed herniotomy at once, and opened the sac, which contained a small spherical piece of ileum, only part of the circumference of the gut. The bowel was severely nipped and furrowed, and had a white patch on it, but was returned. The symptoms never abated, and death took place in about thirty-six hours. The post-mortem examination revealed sticky peritonitis, the injured piece of gut adhering to abdominal wall near the crural ring; bowel distended above, contracted below this point. Here, too, though the symptoms persisted, no actual strangulation remained, but obstruction was nevertheless, I believe, kept up by the adhesion of the injured bowel in a folded state, aided by the paralysis of the bowel above.

In each of these cases, though strangulation was removed, still obstruction remained—an amount of obstruction which would probably be imperative in the case of an uninjured bowel.

Another feature of Case 1 attracts attention. If this case had recovered, it might have been described, with some show of reason, as a case of "strangulated omental hernia." It was noticed that at the post-mortem examination the bowel was distended as far as the middle of the transverse colon, which was dragged down by the colon engaged in the inguinal canal and scrotum and by that loosely adherent to the neighbourhood of the internal ring. But there had certainly in this hernia been a piece of ileum which was reduced by taxis; the redundant omentum was reduced at the herniotomy, and both took up a position close to the internal ring. By this time, however, no doubt the distended bowel was paralysed; before it could recover its power, the omentum was firmly enough adherent below to keep up its slight drag on the colon; hence the continuance of the obstruction.

In reference to the supposed strangulated omental hernia, let me here quote a passage out of Lawrence on Ruptures, fifth edition, p. 454: "If strangulation of the omentum by the ring is sufficient to produce dangerous and mortal consequences, must they not be equally expected from that stricture which is caused by the ligature?" Here the ligature of the omentum is condemned on the supposition—a most reasonable one—that strangulation must be a consequence. But has not ligature of the omentum been over and over again practised without harm?

* Surgery, pp. 332, 333.

In "Surgery, its Principles and Practice," by Mr. Holmes, 1875, p. 586, I read: "The strangulation, even of the omentum only, produces symptoms identical in kind with those of strangulated bowel, though possibly not so severe—a fact which I find it difficult to account for on purely mechanical principles, especially as the omentum, when exposed in the operation for hernia, is constantly tied tightly, in order to remove portions of it, with complete impunity." This is the only reference I have yet found to the difficulty of accepting this manifest contradiction, which by many writers on hernia is received as a fact in confident terms. I suppose that the real fact is that strangulated omentum may indirectly produce symptoms of strangulated intestine, in consequence of dragging; but I imagine that, apart from its connexion with intestine, and the possible consequences of that connexion, mere strangulation of omentum, *per se*, not only cannot exist, but, as a proposition, must be looked upon as unthinkable.

CASE 4.—In this case the man died six months after reduction of an inguinal hernia by taxis in the infirmary, having suffered the whole time from pain in the bowels, obstruction, diarrhœa, &c. At the post-mortem examination the injured piece of ileum was found narrowed and tortuous, all the intestines above being much thickened and dilated. The sigmoid flexure was, moreover, adherent to this coil and to the bladder, and was burst besides just above the attachment to the bladder. Here had been obstruction at the former seat of strangulation, consequent hypertrophy of bowel, adhesion below, and a second obstruction of this bowel (by dragging), and then rupture. He was attended by my friend, Dr. Adam, who gave me the opportunity of seeing the case after death. This case seems to illustrate the obstructive effects of adhesion and traction to a singular degree.

In the two following cases the strangulation was kept up by acute flexure of the coil of gut round the corner of the sac's neck.

CASE 5.—Herniotomy by Mr. Bickersteth after sixty-four hours' strangulation of an old congenital inguinal hernia. Strangulation removed. Hernia displaced through neck of sac into iliac fossa; bursting of intestine and extravasation of fæces into subperitoneal tissue of side of abdomen. The gut was here folded acutely, and the coil adherent to itself in its lesser curve.

CASE 6 occurred in the practice of Mr. H. O. Thomas, and when I saw it, the patient, aged nineteen, had had hernia on the right side for eleven days, strangulation two days. He was collapsed, vomiting fæces, almost pulseless, with abdomen tense, and, with each vomit, fæces welled out of the hernial tumour, through the puncture of an aspirator. Mr. Thomas opened the sac, the hole in the bowel was pinched up in artery forceps and tied with carbolised catgut, as were also several bleeding points where adhesions had been torn. There was no stricture in the sac, and the gut, now it was free, was easily put back. The patient quickly recovered. The cause of the hernia was the invitation held out by an undescended testicle in the groin.

We here see grounds for obstruction and all the symptoms of strangulation, although in one case the nipping of the gut had ceased, and in the other had never existed.

A word as to the cause of death in these cases. It seems to have been due immediately to "exhaustion," in one or two with "collapse" supervening. The exhaustion may be the result of pain and the general distress which the symptoms lead to. But "peritonitis," "artificial anus," "fæcal extravasation," "reduction *en masse*," though often assigned as causes of death, are, most of them, and probably all at times, compatible with recovery, and can never really be called causes of death. They produce exhaustion, which, probably more than anything else, immediately leads to a fatal issue.

Liverpool.

ONLY one death was referred to small-pox in London during the week ending 5th inst., although the Small-pox Hospital at Stockwell contained 66 patients at the end of the week. The comparatively small fatality among these small-pox patients is due to the fact that the 66 included 53 vaccinated, and only 13 unvaccinated persons. The majority of cases continue to be admitted from South London.

COMPLETE HISTORY OF THE "ABORTION CASE" AT LEICESTER.

BY C. F. BRYAN AND G. C. FRANKLIN.

History of the illness of the deceased woman. (By Mr. BRYAN.)—On April 20th, of this year, I was sent for to see a child, three years old, whom I found to be suffering from scarlet fever, with well-marked rash and throat symptoms. The child progressed favourably up to April 29th, when I paid my last visit. (The patient's friends were not able to pay for a long attendance.)

About 9 o'clock the following morning (April 30th) I was sent for to the same house to see Mrs. G——, the mother of the child I had been attending, and on entering the house I was met by her sister, who informed me that Mrs. G—— had miscarried on the previous Thursday, and had been ill ever since. I found the patient in bed, and at once observed that she was the subject of acute peritonitis. She had no sore-throat and no rash; but from the fact that the child I had been attending up to the previous day had slept each night with its mother, I concluded that the mother was suffering from puerperal peritonitis occasioned by the scarlet fever poison. I saw her the two following days. She died on May 2nd, and on the same day I gave a certificate of death as follows: — "*Primary*, miscarriage; *secondary*, scarlet fever." I knew quite well that had I certified "puerperal fever" or "puerperal peritonitis" I should have damaged my practice. She was, I believe, buried as quickly as possible.

When attending a confinement in an adjoining street two or three nights subsequently I was told that, in virtue of my certificate, I had allowed Mrs. G——, on whom abortion was alleged to have been procured, to be buried. I immediately informed the coroner of what I had heard, and he, after obtaining sufficient evidence, ordered the body to be exhumed, and a post-mortem examination to be held.

Autopsy, May 17th, fifteen days after death. (*Notes by* Mr. FRANKLIN.)—Body of a well-formed woman. Abdominal parietes much discoloured from post-mortem change. Marked distension of abdomen; on reflecting the walls there was evidence of extensive peritonitis. The intestines were everywhere matted together, particularly so about the fundus of the uterus and in the right iliac fossa; here also the intestine was more or less adherent to the abdominal wall. The peritoneal cavity contained about a pint of decomposing, stinking pus. The intestines were carefully raised from the iliac fossæ, and the uterus, together with the ovaries, the bladder, and the rectum, all carefully sponged, cleaned, and examined *in situ*. Commencing anteriorly: The superior surface of the bladder was smooth and glistening. The fundus of the uterus looked about twice its normal size (measurements were taken after removal from the body); its serous surface was generally smooth, glistening, and pale. Just below the summit of the fundus, on its posterior wall, a little to the right of the median line, there was a patch, the size of a half-crown piece, showing considerable roughness and vascularity; it was markedly red as compared with the pale-greenish colour of the peritoneum all round it. About its centre was a dark-coloured wound. By sponging the serous surface carefully, and removing small flakes of inflammatory lymph, this mark became more distinct; and then minute particles of apparently decomposed clot came away, leaving a slit with everted edges, one-sixteenth of an inch deep, which had all the appearance of a clean, incised wound, a quarter of an inch long. The right ovary, and also the broad ligament in part, were more or less firmly adherent in the iliac fossa. The ovary of this side was enlarged, looked red and much inflamed; the left appeared normal. The recto-uterine pouch was cleared out of all pus and lymph, and no abnormality was observed here. The serous surface of the rectum and the recto-uterine folds of peritoneum were smooth and glistening. The intestine was now divided at the sigmoid flexure, and then the rectum, uterus, ovaries,

bladder, and vagina were removed *en masse* from the body for further examination. The exact position of the wound alluded to above was one inch and a half below the fundus, a little to the right of the median line. A second wound was now seen about one inch to the left, and a little below the first described. This was quite black, not so large as the former one, and the serous membrane seemed to be continuous over it, as if it had been a recent wound that had healed. Lower down on the posterior wall of the uterus, and just above Douglas's pouch, was a third wound, exactly in the median line. This wound, as well as the second, was quite black in appearance, and was horizontal to the long axis of the uterus, or somewhat semilunar; it was just two inches below the first mentioned, and was from a quarter to half an inch long. The serous surface was also quite smooth over this mark. The uterus measured externally, from os to fundus, six inches. Its broadest diameter, an inch below fundus, was four inches and a half. A sound passed internally a little over five inches. The bladder was opened by an incision along the anterior wall; its internal surface was quite smooth; there was no appearance of bruising. The vagina was opened by slitting up its superior wall, to the right of the median line, to avoid the bladder. It measured exactly five inches in length. The mucous surface was all of a dark-red colour; decomposition was advanced about the labia, but no laceration could be detected. The os uteri was now seen to be in a soft, almost sloughy condition, of a dark-green colour; both lips very irregular on the surface; it admitted the tips of two fingers. The uterus was laid open by an incision all along its anterior wall, to the right of the median line. The mucous membrane lining the cavity of the cervix was very irregular and in a sloughy condition, like the os externum, but no laceration could be made out. The cavity of the body of the uterus contained a considerable amount of dark-coloured stinking clot. After carefully sponging out the cavity there remained a quantity of dark, almost black, clot adhering to the mucous surface. Just above the os internum, in the median line of the posterior wall, a small horizontal cut or laceration of the mucous membrane and of the immediately subjacent tissue was discovered; this corresponded to the lowest of the three wounds described as appearing on the external surface of the posterior wall; it was on a somewhat lower plane than the mark on the external wall. No cut or laceration could be satisfactorily made out to correspond with the two other wounds. The wall of the uterus at the fundus was about a quarter of an inch in thickness, at the cervix one-eighth of an inch. No other organs of the body were examined.

From the appearances thus described at length, no doubt was entertained that the posterior wall of the uterus had been punctured in the successful attempt to procure abortion. One witness, a friend of the deceased, in her evidence given before the coroner, said that she (the deceased) told her that "'the man' put his hand into her womb, and that God and herself only knew the pain she went through." The deceased appears to have gone to this man's house, and then to have walked home after the operation, abortion taking place some eight or ten hours subsequently. There is nothing improbable in the fact that the woman should have been able to walk home, a distance of a quarter of a mile, after having received this injury; the wounds would surely nearly close at once, and there would be but little hæmorrhage. Peritonitis made its appearance in about forty-eight hours, and the woman died five days afterwards.

The ready recognition of the wounds was evidently due to the decomposition of the blood which had been effused between the cut surfaces. It was quite black, and, as stated above, came away from one of the wounds when the surface was being sponged. There could obviously be no doubt as to the wounds having been inflicted during life, and not a long time before death.

Supposing the idea of the operator was to puncture the membranes, and so cause a miscarriage, he evidently missed his aim in one instance; the instrument, instead of following the axial curve of the uterus, had, after traversing safely the cervix, gone straight towards the sacral promontory, causing the lowermost of the three wounds. To cause the other two wounds the instrument must have punctured the membranes, probably the placenta, possibly the fœtus too.

Leicester.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

CONCUSSION OF THE BRAIN; PARALYSIS OF BOTH EXTERNAL RECTI MUSCLES; RECOVERY.

(Under the care of Mr. COWELL.)

FOR the following notes we are indebted to Mr. Cheyne, surgical registrar.

T. W. H——, a schoolboy, aged nine, was knocked down by a hansom cab, the wheel of which was supposed to have passed over his chest. When admitted, on April 11th, shortly after the accident, there were symptoms of concussion, as well as slight bleeding from the right ear and nostril. On the following day there was complete paralysis of both external recti; right pupil normal, the left somewhat contracted; left upper eyelid dropped slightly; no ecchymosis of the lids. Bleeding from the right ear had recurred, and there had been vomiting of black blood. The boy was quite conscious, and did not complain of pain. After this he did well, and slept naturally. There was a recurrence of the epistaxis and vomiting on the 15th. Pulse 66. He was allowed to be removed on the 20th, strict quiet being enjoined.

The boy attended fortnightly after his discharge, and he gradually recovered power in the external recti.

On July 24th he was much better, although there was still a slight convergent strabismus, showing that the external recti were still weak. The boy was, however, able to completely evert each eye.

The interest in this case was chiefly in the prognosis with regard to the paralysis of the external recti. The hæmorrhage from the nose and ear warranted in the first instance a transient suspicion of fracture at the base. As, however, the injury was lateral, and the paralysis double, it was more likely that the latter depended upon some effused blood than that it was produced by fracture. It was therefore probable that the external recti would recover as the effused blood became absorbed—an opinion justified by the result.

SEAMEN'S HOSPITAL, GREENWICH.

TWO CASES OF UNUNITED FRACTURE.

(Under the care of Mr. W. JOHNSON SMITH.)

A POINT of interest in each of the following cases is the small amount of constitutional and local reaction produced by the severe surgical procedures. This Mr. Smith is disposed to attribute to the employment of antiseptic precautions. The second case is still further interesting, because it tends to confirm a statement made by Mr. Erichsen that Dieffenbach's operation is particularly successful in ununited fracture of the humerus.

CASE 1. *Ununited fracture of bones of leg.*—L. S——, aged twenty-nine, a Norwegian sailor, was, when serving at sea on March 4th, 1875, struck down by a heavy wave, and received a fracture of the right leg near the ankle. During the first five weeks after this accident the man was laid up on board, lateral splints of wood having been applied to the injured limb. At the commencement of the sixth week he was admitted into the hospital of an English port, where he was treated up to the end of July. On July 31st, five months after the date of the accident, he was admitted into the Seamen's Hospital at Greenwich. It was then found that fracture had taken place at about the middle of the lower third of the right leg, and that both bones had been involved. There was no appreciable shortening of the limb, and no marked overriding or projection of the upper or lower fragments. The lower fragments, both of the

fractured tibia and the fractured fibula, were freely movable, and there was much tenderness along the line of fracture, which extended transversely across both bones at almost the same level. No crepitus could be made out. The patient was unable to bear firm pressure on the sole of the right foot, and could not move about save on crutches. The right foot was slightly atrophied, and the integument about and below the seat of the injury was smooth and cold, and marked occasionally by pale, livid patches. The case was at first treated as one of retarded union. Firm pressure was applied immediately above and below the fracture by means of pads of lint and strapping, and the injured limb, from the middle of the thigh down to the toes, was encased in pasteboard splints and a thick coating of bandages saturated with water-glass (silicate of potash and magnesite). On removal of this apparatus on October 4th, there was found to be less mobility of the fragments, though the progress towards firm union had not yet been very satisfactory. On October 11th, after very free twisting and rubbing together of the fragments whilst the patient had been placed under the influence of ether, a second fixed apparatus of a similar kind was applied. The patient, after an interval of four days, was allowed to move about on crutches and sit in the open air. On October 27th, when the leg was again uncovered, the fragments of the tibia were found still freely movable, whilst those of the fibula seemed to be much less so. No thickening whatever of the applied ends of the tibial fragments, and no persistent swelling and congestion of the superjacent soft parts, had hitherto been produced by the practice of retention and compression carried on between the beginning of August and the end of the following October.

On Nov. 1st, 1875, after the administration of ether, and the right leg having been rendered bloodless by Esmarch's apparatus, a long vertical incision was made on the inner surface of the limb and carried down to the tibia at the seat of fracture, and for some distance along and below this point. The ends of the upper and lower fragments, which ends were rough, jagged, and uncovered by any fibrous structure, were then forced through the wound and sawn off very obliquely from below upwards and outwards towards the fibular portion of the wound. The two fragments of the fibula, which could be readily separated, were just clipped at their extremities by means of bone-pliers. Two holes having been drilled in the inner wall of the tibia, one above, the other below the solution of continuity, a thick wire was passed through each of these, and then fastened by three turns in order to bring the fragments of tibia together and to retain the raw surfaces in contact. The operation was performed under the carbolic acid spray; the edges of the wound were brought together by prepared sutures over a drainage-tube, and the seat of the operation was covered by antiseptic gauze and the accessory applications. The limb was then placed on a back-splint of iron and finally suspended. The general reaction after the operation was mild. On the evening of the day after the operation the temperature was 101°, on the following day it fell to below 100°, and afterwards remained normal. No superficial inflammatory action was observed at the seat of the operation during the dressings, which were changed every sixth day with attention to antiseptic details. The progress towards firm union of the bones, though very slow, was satisfactory. At the end of December there was much thickening both of bone and of soft parts about the wire ligature, but the fragments were still freely movable. At the end of January, 1876, there was but slight movement. Early in March, when the union was pretty firm, a water-glass bandage was applied to the limb, and the patient allowed to move about on crutches. On March 28th union was firm, there was very little swelling of the limb, no distortion, and the movements of the foot at the ankle-joint quite free. On May 2nd the wire ligature was untwisted and removed. The patient was discharged on June 3rd, with the fragments firmly and regularly united, and he was then able to walk well and without the support of a crutch or stick.

CASE 2. *Ununited fracture of humerus.*—M. M——, aged twenty-six, was admitted into hospital on Dec. 27th, 1875, with a simple fracture of the right humerus produced twenty-four days previously through a fall from a yard. The fracture extended through the junction of the middle and lower thirds of the shaft; it was not very oblique, and there was but little tendency to overriding of the then very movable fragments. Shortly after the patient's admission the injured limb was put up on an internal angular splint, reaching from the armpit to the hand. On Jan. 10th, 1876, the seat of the injury was firmly strapped, and the whole limb fixed in a water-glass bandage and pasteboard splints. On March 4th the fragments were still very movable, and the arm quite useless. The ends of the fragments were freely rubbed together on March 7th, and another fixed apparatus applied. On March 25th the arm was again uncovered, and put up for the third time. From March 7th to the 29th the patient was kept in bed.

As no satisfactory result had been effected by the above-mentioned treatment, and as the upper and lower fragments of the broken shaft were still freely movable on each other, the patient was placed under the influence of ether on May 1st, the seat of the fracture exposed by a vertical incision made on the outer surface of the limb, and three ivory pegs driven into holes drilled in the wall of the bone, two pegs being fixed above and one below the line of fracture. The applied ends of the fragments were not separated from each other in the operation. The limb had been rendered bloodless before the operation; the wound was made under the carbolic-acid spray, and dressed antiseptically.

On the evening of the day of operation the axillary temperature was 100°; on the following morning it was normal, and subsequently remained so. The wound healed rapidly and completely, so that the outer broad ends of the ivory pegs were covered over by sound cicatrix. On July 8th there was firm union, and the limb could be freely moved save at the fingers, which could not firmly grasp any object; at this date two of the pegs, which were felt to be quite loose, were removed through a small incision. On July 15th the third peg was removed. In each peg a considerable portion of the lower and pointed extremity had been removed, and the stump was jagged and slightly discoloured. The patient was discharged as cured on July 23rd; the movements of the right hand and fingers were, however, still feeble.

CARDIFF INFIRMARY.

POPLITEAL ANEURISM; LIGATURE OF FEMORAL WITH CARBOLISED CATGUT; CURE.

(Under the care of Dr. SHEEN.)

WILLIAM R——, aged thirty-six, labourer, was admitted into the infirmary on May 23rd, 1876, suffering from aneurism in the right popliteal space and great œdema of the leg. He stated that he first felt a cramp in the back of the knee, with shooting pain down the calf, about nine weeks before admission, which he was unable to account for. He had only a few days previously been discharged from the Bristol Hospital, having suffered from a compound fracture of the lower jaw, which was not quite healed when he entered the infirmary. He stated that he had a blow on his leg when he fractured his jaw in March, but he could not remember anything further about it. He had to give up work four or five weeks ago on account of the pain and swelling in his leg. Measurement: Right knee, 18½ to 19 inches; left knee, 15 inches. Carte's tourniquet was applied, but was given up in a week, owing to the treatment not being efficiently carried out.

On June 9th (seventeen days after admission) the diameter of the right knee was about half an inch greater. The femoral was tied about the apex of Scarpa's triangle, which lay very deep, owing to a thick layer of superficial fat. The greater part of the operation was done antiseptically, until the apparatus slipped out of the assistant's hands on to the floor. The carbolised catgut ligature, which has been used for some years at the infirmary, was used in this instance with perfect confidence in the result, as there has never been an accident with it yet at the infirmary. No chloroform was given. The edges of the wound were brought together with silver-wire sutures, and a drainage-tube having been inserted, the wound was covered with antiseptic gauze and bandage, and the whole limb enveloped in cotton wool.

June 11th (third day).—Limb cold for some hours after the operation, but got warm about five P.M. Wound dressed to-day for the first time, antiseptically. No redness; slight

sero-sanguinolent discharge; no smell. Line of incision healed except at lower part. Drainage-tube cleaned and replaced.

13th.—Dressed again; scarcely any discharge; no pain.

18th.—Wound completely healed; stitches taken out; drainage-tube dispensed with. There was not the slightest rise of temperature throughout, and the patient's diet was never changed.

28th.—Swelling much decreased, and whole leg and tumour much more supple. No pulsation in latter. Sensation at toes not so good as in other foot, but is improving rapidly. Measurement at knee, 17 inches. To get up and move on crutches.

July 13th.—Doing well. Made an out-patient.

Remarks by Dr. SHEEN.—The chief interest of this case is the use of the carbolised catgut ligature. About six months ago Mr. Holmes brought forward a case at the Clinical Society, and the question of the use of the carbolised catgut ligature was very fully discussed. In the tying of all vessels at the Cardiff Infirmary we have used nothing but this ligature for several years, and the few cases we have had of tying vessels in their continuity have done remarkably well. By the courtesy of my friend and colleague, Dr. Taylor, I am enabled to mention two cases which were under his care, and which did well.

1. M. B——, aged forty. Popliteal aneurism. Admitted March 19th, 1873.—March 21st: Tourniquet applied.—April 21st: Carbolised catgut ligature, and ends cut off. Wound healed by first intention. [This case was treated in a tent in the infirmary grounds.]

2. W. B——, aged thirty-eight, admitted Dec. 21st, 1875.—Dec. 29th: Similar operation.—Jan. 22nd, 1876: Discharged cured. This man had been treated by pressure in a Cork hospital some years before, and had a deep scar the size of a five-shilling piece directly over the femoral artery, which could be felt pulsating just beneath.

Both these were very interesting cases.

It is surprising to see how curtly our text-books speak of the catgut ligature. Surgeons in all parts of the country doubtless use the catgut ligature in the treatment of aneurisms, and yet Bryant, in his second edition, published within the last few months, scarcely mentions it. Chloroform was not given in this case. Bryant states, "it need hardly be said that chloroform should always be given in these cases." But this is really not necessary. The first incision is the only painful one, and if a patient have a fair amount of courage I should not be inclined to give chloroform unless a decided wish to have it was expressed.

It seems only reasonable to suppose that a trial of the treatment by pressure for some days, though it fail to cure the aneurism, should facilitate the establishment of the collateral circulation after the operation of applying a ligature to the main vessel. I think I have seen it so stated in surgical works. And yet Mr. Holmes tells us, in his lectures delivered before the Royal College of Surgeons in 1874, that the mortality in such cases is greater than in those where the ligature is applied without any attempt at treatment by pressure.

LIVERPOOL ROYAL INFIRMARY.

CASE OF POISONING BY CYANIDE OF POTASSIUM.

(Under the care of Mr. WILLIAM GILLIBRAND.)

JAMES K——, aged thirty-five, was admitted between 2.35 and 2.40 P.M., on the 21st of June, suffering from poisoning. On admission the patient was quite insensible. The eyes were fixed, pupils dilated and insensible to light; he was breathing very slowly and spasmodically, white froth was issuing from the mouth, and the jaw was fixed. The pulse could be just felt, but was not counted. The muscles of the extremities were relaxed, and the limbs flaccid. The body was covered with a cold clammy sweat. He smelt very strongly of prussic acid. With the assistance of Mr. Gorst, the stomach-pump was introduced, and the stomach washed well out with warm water. The fluid which came away had a very strong smell of prussic acid. After this, artificial respiration (Silvester's) was performed for about an hour. During this time galvanism was used, one pole being placed over the course of the phrenic, the other over the epigastrium, and strong liquor ammoniæ applied to the nostrils. After the artificial respiration had been carried on about an hour and a quarter, the vocal cords seemed to be paralysed, and the tongue to fall back, so preventing the free entrance of air into the chest. A threaded needle was passed through the centre of the tongue, and the organ drawn forward by an assistant. For a little while air seemed to enter the chest much better, but it soon became apparent that air had ceased to enter. Without delay tracheotomy was performed, and a tube inserted into the trachea; and when bringing the arms in front, the chest was forcibly compressed, when thick and tenacious mucus was forced through the tube, "this evidently having blocked up the trachea, for on examining the chest afterwards he was found to be suffering from bronchitis." After keeping up the artificial respiration for about another quarter of an hour, the patient appeared to make spasmodic attempts at inspiration. These continued at intervals of a minute or a minute and a half, gradually becoming more frequent. The artificial respiration was then performed with the attempts at natural respiration. After about twenty minutes more, the natural respiration was sufficiently established to justify cessation of the artificial. After watching the patient carefully for some time, he was carried into one of Dr. Waters's wards and put to bed, when it was found that the sphincter ani had been relaxed. Hot bottles were applied to the feet and body. A tent was made over the bed, and the air kept moist by means of steam. The tracheotomy tube was removed after it had been in about two hours, as the patient was becoming very restless and could breathe very well through the nostrils. He became conscious about seven o'clock, and began to vomit a little before eight, the vomited matter being that which had been injected; this had a faint smell of prussic acid. After vomiting he was much better and could talk, and he told the nurse that he took the poison in a fit of passion. He complained of great thirst, and was ordered milk and lime-water; also of pain when swallowing, and of pain at the epigastrium, which he said was of a griping, intermittent character. About ten o'clock he vomited again, the vomited matter consisting of curdled milk mixed with blood. About eleven he complained of a gnawing pain across his temples.—1 A.M.: Pulse 88; temperature 101°; pupils dilated.

June 22nd.—Slept well during the night; has passed urine freely; still complains of pain in the head and at the epigastrium, and of soreness all over the body; tongue covered with a thick, creamy fur; pupils dilated; temperature 101°. The patient states that he put a piece of cyanide of potassium into his mouth and chewed it, and washed it down with a drink of tea; says that the poison had a bitter taste, and when it got into the stomach it caused a sensation of heat and burning.

His wife stated that the patient is an umbrella-maker, and that he uses the cyanide of potassium for the purpose of silvering. She said that he took the poison between five and ten minutes past two in the afternoon, and that he was drunk at the time with whisky. After taking it he sat down, then got up and walked to the door—a distance of two or three yards,—when he fell down unconscious. She gave him some salt and water and mustard, which caused him to vomit a little. He was then put into a cab, and brought to the infirmary. He did not vomit during the transit, only frothed at the mouth. The police-officer who took him to the infirmary brought a broken bottle containing two pieces of cyanide of potassium, the largest piece weighing forty-six grains. The piece which he took would weigh probably between fifty and sixty grains. Both the wife and the patient stated that the piece he took was larger than the largest of the two pieces mentioned.

23rd.—Has slept well during the night. Pulse 96; temperature 101·2°. Complains of pain on pressing over the epigastrium.

24th.—Feels considerably better. Has slight pain on pressing over the epigastrium. There being very little bronchial irritation, the tent was removed to-day. Pulse 96; temperature 102·2°.

25th.—Patient states that he feels quite well. Has no pain on pressing the epigastrium. Pulse 84; temperature 99·8°.

Reviews and Notices of Books.

Lectures on Surgery. By JAMES SPENCE, F.R.S.E., Surgeon to the Queen in Scotland, Professor of Surgery in the University of Edinburgh, &c. Second Edition. Two Vols. Edinburgh: Adam and Charles Black. 1875.

BETWEEN the first and second editions of Mr. Spence's Lectures on Surgery there was a comparatively brief interval of a little over four years—a sure sign that the work possessed considerable merits, and that there was a large number of persons not slow to recognise them. The work consists of the professorial lectures delivered in the University of Edinburgh, supplemented with additions from original papers and observations, and with a valuable collection of clinical cases and remarks. In the second edition, the plan of appending carefully selected illustrative clinical cases, with remarks, has been more fully carried out, with the effect of giving to the work a distinctive character. To the student and practitioner alike, nothing can, we imagine, exceed in value the perusal of the notes of illustrative cases of disease or injury. Coming after a systematic description, these notes give a point to the instruction, and serve to impress more deeply on the mind the lessons previously taught. Another prominent feature of Mr. Spence's work is the lavishness of the illustrations, which consist of plates, chromolithographs, and woodcuts. Many of the engravings possess much artistic merit, and the worst that can be said of any of them is that they are perhaps unnecessary. In this edition the Structural Classification of Tumours has been entirely rewritten by Mr. D. J. Cunningham, while Dr. Braidwood has furnished a brief abstract of the results of his researches on Pyæmia.

In reviewing the work of an Edinburgh surgeon we are naturally led to seek his opinion on the antiseptic method. Mr. Spence has for years worked side by side with his colleague Mr. Lister, but he is known to have adhered to the simple mode of treating wounds. A comparison of the results of these two surgeons would be interesting if only the data were obtainable. Mr. Spence remarks, however, that during a period of three years, out of sixty-three major amputations for disease, he lost only three cases; and of twenty-three cases of excision of joints he lost only two, "at a time when the treatment consisted in thoroughly cleansing the cut surface by pouring tepid water over it and occasionally applying tincture of iodine alone, or diluted, on the flaps, whilst the dressing consisted merely in laying a veil of lint or thin muslin over the stump." He also very pertinently adds that he found "that certain conditions, such as the nature of the disease or injury necessitating the operation, had a most important influence on the result ..... so that I cannot accept the statement that any method of treatment, however good, will ever enable us to guarantee success." Mr. Spence may be held, therefore, to take the view entertained by many surgical writers in this country, that the advanced claims of the antiseptic method are "not proven."

The author has decided to omit altogether a description of the diseases and injuries of the eye, and, we think, very properly. Ophthalmology has now become so extensive and complicated that it cannot be properly considered in a didactic work like that of Mr. Spence's. A brief account is doubtless admissible and acceptable in a work which is designedly written for students and for purposes of examination, but would be quite out of place, we think, if insinuated among these lectures on surgery.

Further notice of this suggestive work is now unnecessary. There is food alike for the youngest student and for the most thoughtful practitioner.

The Practice of Surgery. A Manual. By THOMAS BRYANT, F.R.C.S., Surgeon to, and Lecturer on Surgery at, Guy's Hospital. With 559 Illustrations. Second Edition, revised and enlarged. Two Volumes. London: J. & A. Churchill. 1876.

MR. BRYANT has evidently spared no pains to make the second edition of his Manual more useful, attractive, and convenient than the first. Many important alterations have been made both in the substance and in the arrangement, and, while a good deal has been recast, the whole bears unequivocal marks of complete and thorough revision. The utility of the work has been further enhanced by the addition of a brief but useful chapter on Diseases and Injuries of the Eye by Mr. Charles Higgens, one on Diseases of the Ear by Dr. Laidlaw Purves, another on Dental Surgery by Mr. Moon. Among the other additions may be mentioned some remarks on the diagnosis of ovarian tumours and on deformities, and over one hundred new woodcuts.

For the sake of greater convenience, the work has been divided into two volumes, the first including the elementary principles of surgery, tumours, the surgery of the cutaneous, lymphatic, nervous, circulatory, and digestive systems; the second the surgery of the respiratory, urino-genital, muscular, and osseous systems.

In every respect, then, the work is improved, and is now far from unpleasant reading. Mr. Bryant's manual may be classed with the best in our language for the student and busy practitioner. By a careful perusal of this work, the reader imperceptibly acquires a large amount of surgical lore. The pages are replete with verbal quotations from the writings of the most eminent surgeons of all ages, while the practical lessons have the stamp of authority about them. Guy's is and always has been a worthy representative of the British school of surgery, and Mr. Bryant has not been unmindful of the traditions of his *alma mater*. The character of his thought and work has received the unmistakable impress of his illustrious teachers and predecessors. The valuable stores of pathological museums are laid under contribution, and the woodcuts are all very good, and many of them original.

The West Riding Lunatic Asylum Medical Reports. Edited by J. CRICHTON BROWNE, M.D., F.R.S.E. Vol. V. London: Smith and Elder.

THIS volume, like its predecessors, consists of a series of papers on mental and nervous diseases, and on some connecting physiological topics. Most of them are by past or present medical officers of the West Riding Asylum, but some are by writers unconnected with the asylum, and are inserted apparently to give additional weight to the volume. On the whole, it is a good series of contributions, but some of the papers have too much the aspect of set pieces and work done to order, and for publication, complete or incomplete.

The first paper is an account of some observations by Dr. Merson on the influence of diet in epilepsy, with the view of testing Dr. Hughlings Jackson's speculation that in epilepsy nitrogen replaces phosphorus in the nerve-tissue, and so a more explosive compound is produced. The only definite conclusion reached is, that the observations were not extended over a sufficient time to obtain any accurate conclusion. They seem to suggest, although not unanimously, that a farinaceous diet is more likely to be useful in epilepsy than a nitrogenous diet.

Dr. Ferrier discusses the symptoms of Menière's disease in the light of the usual explanation which is given for them—viz., Crum Brown's theory of the action of the semicircular canals. He has noticed in one case of the disease the presence of the common symptom of labyrinthine mischief—inability to hear sounds conducted through the bones

of the skull, and assumes that the semicircular canals are the seat of this function.

The physiological action of hyoscyamine has been carefully investigated by Dr. R. Lawson, who finds that in animals it first depresses and then quickens the pulse, reduces the temperature, and that it dilates the pupil as actively as atropine. In man its effect on the brain is more distinct than in animals. The first effect is excitement, and then hypnosis. It acts also as a diuretic.

Mr. Bevan Lewis contributes an account of the histology of the great sciatic nerve in general paralysis of the insane, and Dr. Hughlings Jackson a paper on the temporary mental disorders which succeed epileptic paroxysms, in which several interesting points in the physiological and medico-legal aspects of the question are discussed. The state of the retina and choroid of rabbits during the administration of certain drugs has been observed by Dr. Arbuckle, who found that neither nicotine, atropine, aconite, chloral, nitrite of amyl, prussic acid, strychnine, hyoscyamine, or morphia effected any observable change in the retinal circulation. The author concludes that the state of the intraocular circulation is no reliable indication of the state of the circulation in the brain.

The peculiar vascular tumours common on the ears of the insane, "othœmatomata," are described by Mr. Lennox Browne; and Dr. Major contributes a brief but interesting account of some points in the morbid histology of the brain of the lower animals, especially the senile changes in the organ. He found very marked atrophy and degeneration of the nerve-cells of the convolutions. "Cerebral Hyperæmia" is the subject of an essay by Dr. Milner Fothergill; and Mr. H. R. O. Sankey describes a new process for examining the structure of the brain, which consists in first drying on glass a stained portion of the recent brain, and then planing down the section to the necessary thickness. Dr. C. F. Newcombe has collected from the asylum case-book the facts relating to the occurrence of convulsive seizures in general paralysis of the insane. He finds that they are unilateral in the majority of cases, and occur with equal frequency at all ages.

Dr. Crichton Browne's own contributions are among the most interesting in the volume. They consist of a descriptive Note on Chronic Mania, and a paper on the Functions of the Optic Thalami. The latter contains a considerable number of facts in support of the view that the optic thalami are the chief centres for common sensation, and are also important centres for reflex action. The writer has observed that in most cases of lesion of a thalamus, the hemiplegia which results is accompanied by a very remarkable and permanent abolition of reflex action in the paralysed limbs. This is, at first sight, difficult to reconcile with the increase in spinal reflex activity which follows section of the cord at a higher point. Several theories to account for the discrepancy are proposed and discussed, and the conclusion reached is that every reflex action involves a double current of molecular change, one direct through the cord, the other through a "loop line" which extends up to the thalamus, is concerned in the liberation of higher reflex movements, &c., and is essential also for the liberation of the motor impulse of the lower spinal reflex action. He believes that the integrity of the path to the thalamus is sufficient to prevent the spinal overaction which occurs when that path is blocked in division of the cord.

The remaining papers are on the therapeutic value of Chloral Hydrate in Epileptic Convulsions, by Dr. J. A. M. Wallis; and on the Laryngeal Changes in General Paralysis, by Mr. Lennox Browne, who finds impairment of tension and of co-ordinate action in the vocal cords unaccompanied by any distress of respiration, and this, together with the diminished reflex activity, indicates, he believes, that the superior laryngeal nerve is that chiefly affected.

Botanical Tables. For the use of Students. Compiled by EDWARD B. AVELING, B.Sc. Second Edition. London: Hamilton, Adams, and Co. 1876.

THE intelligent study of systematic botany is considerably facilitated by the employment of some such guide as is presented in these tables, but we are glad to find Mr. Aveling in his preface giving a timely warning to the student not to imagine that their perusal is intended to supersede practical work and observation. That a second edition should have been called for is evidence of the manner in which the present tables have been appreciated, and proves the care and accuracy with which they have been compiled.

THE BRITISH MEDICAL ASSOCIATION.

ANOTHER annual meeting of this Association is past and gone. There are few noteworthy features to record in connexion therewith, although the papers prepared were, as usual, far too numerous to mention. And we may in this place at once record our protest against the plan of crowding a vast number of papers into one sectional meeting. That on Public Health, for instance, included, on Thursday, several specially interesting subjects, and notably one as to the extension of the Contagious Diseases Acts, read by Mr. Lowndes of Liverpool. The opponents of the Acts were evidently in tolerable force, and a discussion was asked for, but had to be declined, because only half an hour remained, and four papers were still unread. This wholesale scamping of work renders the sectional meetings wholly unattractive, and hence we are not surprised to hear of the very sparse attendance on most occasions.

The Address in Surgery by Mr. Favell of Sheffield was eminently sound, sensible, and practical, and though containing very little new material, included (as the speaker suggested) much that was useful and would bear investigation. The observations of Dr. Brown-Séquard on inhalation as a therapeutic agent attracted a fairly large audience; and the address of Dr. Carpenter on Friday (a summary of which will be found in another column) was listened to attentively, and with marked appreciation. There is little to remark as to the work done at the sectional meetings. That on Medicine included papers on Trade Diseases, by Dr. J. C. Hall of Sheffield, and others. Mr. Callender read notes of cases illustrating the treatment of chronic abscess by hyperdistension with carbolised water, and Mr. Holthouse, in the Public Health section, sent notes on twelve months' experience of the treatment of inebriates. Several other practical papers, on the Contagious Diseases Acts, on the legislative measures necessary to arrest the spread of infectious disease, &c., were also brought forward in this section, but no time existed for the discussion of any of them.

The dinner on Thursday evening was attended by about 250 guests and members, the former including Mr. Roebuck, M.P., who discoursed very ably on the foolish agitation that has recently occurred in connexion with the Cruelty to Animals Bill. On Friday a party of 100 members were entertained most hospitably at lunch by Lord and Lady Wharncliffe, at The Crags, and another party went to Lord Fitzwilliam's seat at Wentworth. The concluding meeting, held on the same day, was very thinly attended, the usual complimentary resolutions being carried, and the task of finding a place and a president for next year's meeting, being laid upon the shoulders of the Committee of Council, to whom, in their laudable undertaking, we wish all possible success. The meeting was pleasantly brought to a close on Saturday by excursions to Chatsworth, where many members were entertained at lunch by the Duke of Devonshire, as well as to Haddon Hall, Matlock, and Buxton. The Association owes much to the indefatigable industry and courtesy of Drs. Arthur Jackson and Keeling, to whom, as well as to Dr. Bartolomè, the president, many acknowledgments are due.

THE LANCET.

LONDON: SATURDAY, AUGUST 12, 1876.

THE case of CHARLOTTE HAMMOND has, unhappily, in no way contributed to the settlement of a question which in many districts forms the occasion of ceaseless vexation and difficulty to well-meaning, but not very acute or else somewhat too sensitive, practitioners. Probably the greater number of parochial and district medical officers practise discretion rather than valour in their dealings with the official who administers Poor-law relief, and the complicated machinery works smoothly; or, if there is much friction, the overheated points of contact are allowed to cool down now and again before the surroundings actually take fire. When this occurs frequently and nothing particular ensues, the medical officer is pleasantly described in the relieving officer's room as a fiery person whom the lay official has the tact to *manage*. Whether this reaches the ears of the medical man, or is unknown to him, he contrives to discharge his duties in tolerable peace, and the local public are not regaled with his grievances. In many districts, as we have hinted, matters are not thus smoothly progressive, or the periodic "differences" so amicably adjusted. We doubt if it would be far wide of the truth to say that when medical and relieving officers are both striving to discharge their duty, the one to his poor patients, the other to the relief committee, the guardians, and the ratepayers, collisions must be frequent, and when they occur, a quiet settlement generally implies compromise, in which the interests of some dependent sufferer, or a point of principle, are sacrificed. It is, in fact, confessedly difficult, in the present state of the law, to avoid entanglement in its loose meshes, and, being caught, it is almost impossible for an honest man to extricate himself without leaving torn shreds of his temper or repute behind. The probability of becoming involved is, however, likely to be least when a practitioner, instead of "knowing the law," understands the *principle* of Poor-law relief, and perceives how best to satisfy its requirements without either straining or distorting the obligations imposed by a system rotten to the core.

The first lesson to learn—and it will be wise to acquire the information by reference to the Statute-book in place of waiting to be taught by experience—is, that the medical officer has nothing whatever to do with *relief*. It is not for him to determine whether a pauper needs medical or any other kind of assistance. He should neither see at his surgery, nor visit, any pauper who does not present a note signed by the relieving officer, or a card showing that the applicant is on the permanent sick-list, a copy of which last-mentioned document is to be delivered by the guardians, through their clerk—no one else—to the district medical officer, or his deputy, at fixed periods, generally every third month. A strict observance of this well-defined rule will save a world of trouble, and effectually prevent many of the multitude of difficulties prone to crop up where a medical officer is burdened with too much benevolence—i. e., for the Poor-law system,—casually sees a patient, and expects the "order" to be given *afterwards*. Medical men should never make private arrangements, or, indeed, enter into private relations with relieving officers in respect to this or any other part of their duty. In business all proceedings should be governed by strict rule, with the least laxity, and no licence.

The medical officer has neither the power nor the obligation to *order* necessaries. It is on this point practitioners occasionally go astray, with the best intentions. They are aware that the law does not give them power to order "medical comforts," but they are in doubt whether a moral or legal obligation does not rest upon them to see that the patient is properly supplied. It should be clearly understood that neither the power nor the obligation rests with the medical officer. He is simply a practitioner of medicine appointed to *prescribe*. If he were attending a sick person in good circumstances he would not dream of taking measures to ascertain whether the food he recommended could be procured. It is no part of his business to do so in a case for which he prescribes as the adviser of the guardians. The necessaries he thinks requisite are to be prescribed on a special form, copies of which are placed at his disposal. This done, he has no more to do with the case. It may be said, no humane practitioner could see his patient sinking for want of necessaries without going further than we have indicated. That is true; but the medical officer must understand that his *duty* is complete when he has written the recommendation. Anything he does in excess of his duty must be at his own risk, and with such wisdom as the emergency requires.

What further steps should a medical officer take when he finds his recommendation neglected? Cases do sometimes occur in which persons apparently utterly impoverished have the means to procure all they or their sick relatives need. It is impossible that any medical man casually visiting a case can determine how far a family is able to provide the necessaries he prescribes. This is why he is not made the judge of *necessity*. He is the sole judge of what the case requires, but he cannot be judge in the question whether the patient and his friends can, or the guardians must, supply it. Meanwhile, however, the patient should not be allowed to suffer or die from neglect. The course for a medical man to pursue is sufficiently simple. He should visit his patient again, after a reasonable interval; and, if the necessaries are not forthcoming either from the family or the guardians, a second order marked "very urgent" ought to be given. A third visit, allowing a sufficient, but not too long, interval to elapse, should now be paid, and if the need is not then satisfied, or the case removed from the care of the medical officer, when his responsibility would of course immediately cease, a certificate carefully written should be forwarded by a messenger —*not a member of the patient's family*—to the relieving officer, setting out the necessaries required in the case, and stating that in the event of their not being administered for the relief of the patient within a fixed period, the medical officer will hold the relieving officer responsible for what may occur, and, in the event of death, refuse a certificate of the cause. A copy of this final notice should be sent to the clerk of the guardians by the next post. It is important that the communication should be temperately and judiciously worded,

and every medical officer should provide himself with a form of words to be employed in such an emergency, instead of writing impetuously in the heat of the moment. It should always be borne in mind that there may still be a good reason for withholding the necessaries, looking at the matter from the guardians' point of view, which is the *only* one a relieving officer is justified in taking. The certificate is based on the presumption that the relieving officer may solve the difficulty whichever way he pleases, by supplying the necessaries, or by removing the case from the district medical officer's jurisdiction. It is unimportant to the medical officer which course may be taken, but *something* must be done, and that speedily.

If medical officers would take the position and pursue the line of conduct we have indicated, the onus of finding a better way out of the difficulty, and placing the relations of medical and relieving officers on a more satisfactory footing, would rest with the guardians. This is where it should be temperately and courteously left. The present contention is unseemly, and if, as we believe, it is also unnecessary, to prolong it must be unwise.

THE Address in Medicine at the annual meeting of the British Medical Association is clearly a somewhat difficult task to anyone who undertakes it, if we may judge from the shape which it assumes in the hands of even accomplished physicians. Theoretically we should expect it to consist of an account of the present state of medicine, with a report of the work done in late years, especially in the last year, and an estimate of the direction in which diligent medical workers are likely to find reward for their pains. We conceive of the members of the Association as coming from all parts of the country, eager to acquire the knowledge of the latest facts and of the best speculations in medicine. But the actual addresses do not correspond with this conception. Last year the now lamented BENNET, one of the most successful physicians of the century, devoted his address to the praise of ancient medicine in general and of HIPPOCRATES in particular. In the present year Dr. SIEVEKING found material for most of his address in the history of the dead past. "Most of the labourers," he said, "who have brought about what I cannot but call our present hopeful condition, have passed away." Thereupon, while disclaiming anything like ingratitude to contemporaries, he proceeded to descant on the three events which have special reference, in his opinion, to the chief phases of our advancement as the followers of a beneficent and learned calling—viz., our relations to each other and the State, our relations to the science of medicine, and our relations to education. Before noticing the "three events" with which so intelligent an observer as Dr. SIEVEKING associates the advance of the profession, we may venture to say that, in our view, it would be both just and wise in those who deliver the Addresses in Medicine to be a little less sparing of their praise of living men, a little less fearful of giving credit to actual workers, and a little less antiquarian in their researches. We have read Dr. SIEVEKING's address with a great deal of interest. We entirely agree with him in thinking that neither the universities of the country nor its corporations have done nearly so much for the profession and the science of medicine as they should have done. His remarks as to the absence of anything like effective teaching in medicine in England up to nearly the nineteenth century, driving the men who were really in search of truth to foreign universities —are worthy of attention. But they constitute an address in the history of medicine, and not an account of medicine as it presents itself to inquiring and intelligent practitioners in the year 1876, which is, above all, what practitioners actually want, and which is most likely to give impulse and encouragement to medical labourers. We must, however, take the address as we find it; and it is always interesting to see how a well-trained mind in the profession accounts for our present position. Dr. SIEVEKING has at least the credit of giving an original explanation of the present state and relations of medicine. He associates the present state and relations of medicine with three events, the mention of which will at first surprise our readers and perhaps entertain them. The first event was the formation of the Provincial Medical and Surgical Association by Dr. HASTINGS, in 1833; the second event was the publication, in 1846, by Sir JOHN FORBES of his interesting article on Homœopathy, Allopathy, and Young Physic, in the January number of the *British and Foreign Medical Review*, of which Sir JOHN was editor. The third event is the provision — thanks to Mr. PROPERT — of an institution which should, besides providing a home for the invalided and impoverished members of the profession, supply a liberal education at the lowest possible cost compatible with its scope, for the sons of medical men, many of whom were, as foundation-scholars, to receive their training free of all cost. As we understand Dr. SIEVEKING, the formation of what is now called the British Medical Association has led to the better organization of the profession; Sir JOHN FORBES's article was the mother of a new era in the scientific position of medicine; and the creation of the Medical Benevolent College is related to the modern development of our profession by its influence on general education. It favours the teaching of natural science in preference to that of the classics. We shall not be accused of being insensible to the merits of Mr. PROPERT or of the great institution which is inseparably associated with his name. We are of the number of those who remember with pleasure the writings of Sir JOHN FORBES. And, notwithstanding a certain metropolitan provincialism which seems indelibly impressed on the doings of the British Medical Association, we readily admit its considerable success in bringing together once a year the members of the profession. But after all these admissions, there is something almost amusing in a physician, giving before the profession and the public an annual account of medicine in 1876, arresting the mind of his audience before the figures of Dr. HASTINGS, Sir JOHN FORBES, and Mr. PROPERT. There is not one discovery in medicine to be associated with any of these names, though every one of them was honourable in a special way. And with regard to Sir JOHN FORBES, whose article is chiefly associated by Dr. SIEVEKING with what mainly concerns us—the advancement of scientific medicine,—it is to be remembered that, while he dealt a well-deserved blow at a fussy polypharmacy, he only did so by publishing in a popular form the results of the study and clinical observations of other men, and that he failed to express in his article that faith in medicine which is

as much the note of a true modern physician as is the faith in nature. No, with all deference to Dr. SIEVEKING, and with a just veneration for the names which he made the text of his Address in Medicine, he has not used his opportunity well, nor rightly awarded the praise which may justly be expected from one who discourses on Medicine. Some of the advice which he gave to the Association was very good. So was his advice to the Universities. His denunciation of fatalistic views was admirable. But he did scant justice to the great workers and deep thinkers in the profession who are not all dead.

CONSIDERING the enormous extent of the operations of the metropolitan medical charities, the general excellence of their administration, and the self-sacrificing character of the gratuitous services of the medical resident staff, we are at a loss to comprehend the exultation with which a portion of the lay press and many of the public point to any mistake that a house-surgeon may be unfortunate enough to make, or the heartlessness with which they aggravate any mishap or misfortune that may befall him in the discharge of his onerous and ill-requited duties. A circumstance occurred last week which evoked a bitterness and distrust of house-surgeons, and of medical students generally, altogether incredible.

The following is the report given by one of the daily newspapers of a recent inquest:—

"HOSPITAL TREATMENT.—SERIOUS ALLEGATIONS.—Last evening Dr. Hardwicke held an inquest at University College Hospital on the body of Jane Park, aged forty-one, the wife of a lithographic printer, of King-street, Camden-town, who was knocked down by a brewer's dray. Her husband put her in a cab and conveyed her to University Hospital. He complained bitterly of the treatment to which his wife and himself had been subjected. He stated that she was taken into the receiving ward and laid on a couch, and after one of the medical men had looked at her he went away and came back in about an hour. She had been moved in the meantime to the room in which the patients went for their physic, and laid on a form, and the students came in and jeered and made fun of him as well as his wife. She remained an hour and a half without any assistance, and died on the form."

The other newspapers confirmed this representation of the facts, while one paper published the following remarkable sentence:—

"Dr. Hardwicke, the coroner, expressed an opinion to the effect that if at the outset the patient had received the attention accorded after the lapse of an hour and a half, the collapse might have been averted and the woman's life saved, while the jury 'expressed strong indignation' at the treatment the unfortunate woman had received."

No sensible or right-minded person could possibly believe that these reports expressed the whole truth, but they nevertheless served as a text for innumerable discourses on the ethical dulness and moral depravity of medical students, and for a display of maudlin sentimentality quite inexcusable even at this season of the year. Happily, Mr. JOHN ARTHUR KEMPE, M.R.C.S., L.R.C.P., whose character and judgment had been so seriously impugned, has been able to vindicate himself fully and completely, and has sent the following letter to the papers:—

"I hope you will allow me to supplement your report of an inquest held at University College Hospital on Thursday last. I was called to see the deceased at 5.30 P.M., and found that she had sustained a slight scalp wound, and was suffering from some amount of shock. I dressed the wound, and ordered her to rest quietly on the couch in the casualty-room. In half an hour I returned, and found that she had to some extent recovered from the shock. I then left her in her husband's charge, giving orders that she was to lie still on the couch, and that I was to be at once called if any urgent symptoms appeared. I again visited her immediately after my dinner—7 P.M.,—and found that her husband had moved the patient into the waiting-room, on his own responsibility; that there she had fallen down, and was then dying from intense shock. I had her raised from the ground on to a form, and applied all the remedies I could to prolong life, but without avail. I did not say at the inquest that this case was treated as a case of drunkenness, nor was such the fact. I found by the odour of the breath that she had been drinking, but I never for a moment thought that she was drunk. Had I done so, my treatment would have been very different. I found that the woman was suffering from shock, for which there was no very evident cause, and on that account I ordered her to be kept quite quiet, to see whether the shock would pass off, or whether it would increase, or other symptoms arise to throw light on the case. Had she been removed to a ward, undressed, and placed in bed, the effect would have been to accelerate her death, for any movement would increase the hæmorrhage which was gradually destroying this patient's life. Indeed, the removal of the woman from one room to another by the husband was sufficient to do so."

The matter cannot, in fairness to Mr. KEMPE and the hospital to which he is attached, be allowed to rest here. We may add to this rectification further information, which could have been obtained easily enough by those who are responsible for placing before the public the garbled and inaccurate account of the real facts of the case. Although Mr. KEMPE gave orders that the woman was on no account to be moved, the husband, on his own responsibility, assisted her to the water-closet; and, although she fell down in going thereto, and again on returning, he did not think it necessary to acquaint the medical officer with what had occurred. If all the extenuating circumstances of this unfortunate case were not properly ascertained at the inquest, it need scarcely be said that someone was guilty of a serious dereliction of duty. Dr. HARDWICKE is reported to have stated that if the woman had been properly attended to in the first instance, her life might probably have been saved. We are, however, unwilling to believe that any person presumably possessing any knowledge of medicine and surgery could be guilty of the absurdity of alleging that any plan of treatment would be likely to save the life of a person whose spleen had been extensively lacerated and reduced almost to a pulp, and who had, in addition, sustained rupture of the liver and of one of the kidneys. Such a statement would quash for ever the only *raison d'être* of a medical coroner. But we have been unable to discover that Dr. HARDWICKE really did make use of the words attributed to him, and are disposed to give him credit for knowing better than to entertain such an unwarrantable and extravagant notion. One grave question remains still to be considered. A serious and shocking scandal has been created, and an excellent institution brought into temporary disrepute—to

say nothing of the injury and insult inflicted on an able and highly-esteemed house-surgeon—by the publication of the report which has since been proved to be an utter misrepresentation of the truth. Many members of the press added fuel to the fire of indignation which the reports in question had kindled by writing in a deprecatory tone of the conduct and behaviour of those who are entrusted with the grave responsibilities of the medical care of patients who seek relief at our hospitals, and by indulging in odious comparisons between students of medicine and those of other professions. A little charitable reflection would, we venture to think, have produced other feelings. With such important issues at stake, it is greatly to be regretted that the editors of many of the daily newspapers did not hesitate to lend their influence to damage a useful hospital dependent on voluntary contributions, and to degrade one of its most valuable medical officers, on the mere testimony of the persons who supply the reports of inquests.

THE complex structure of the human placenta, the difficulty associated with the investigation of its anatomy, and the mystery surrounding every step in the process of the generation of a new being, have directed more than usual interest to this organ. The structure of the fully-matured placenta, however, is of so intricate a character that, but for the study of the anatomy of the organ in the lower animals, it would hardly be possible to unravel it. For a long time it has been believed that at an early period of gestation the villi of the chorion entered into and ramified in the glands of the thickened mucous membrane of the uterus. It was also believed that the mucosa uteri became interlocked in a very intricate manner with the arborescent chorionic villi, and that a large system of sinuses was formed in the maternal portion of the placental vascular system, into which the uterine arteries poured their blood, and from which the uterine veins carried it away. Into these sinuses the vascular villi of the chorion project, and the tissue separating the maternal blood from the chorionic villi and their contained vessels is of extreme thinness.

The recent investigations of ENCOLANI, and of Prof. TURNER of Edinburgh, confirm in part the above view of the structure of the placenta. The researches of Prof. TURNER are of special value, inasmuch as they extend into all known forms of placenta; and the lectures delivered by him at the Royal College of Surgeons give a description of the organ from its most simple form to the most complex. He shows that the simplest form of placenta consists of a vascular loop of the chorion received into a vascular recess in the decidua. The vessels are in apposition and separated by a thin layer of connective tissue and a layer of secreting and of absorbing cells. By the modification and multiplication of such a vascular loop and recess, and of their individual elements, modifications in size, shape, complexity, &c., the most complex placenta is formed.

The vascular loop is the chorionic villus; the vascular recess into which it is received is not the utricular gland, as was once believed, but a distinct structure formed anew during gestation. It is a crypt varying in shape in different animals, lined by the columnar epithelium of the inner surface of the uterus. As the villi grow longer and become more branched, the crypts grow deeper and subdivided. The glands open on smooth surfaces of mucosa. When the villi have become attached to the crypts, the surface layers of the mucosa uteri grow up between the villi, covering each of their branches and stems as far as the chorion itself. These laminæ of maternal tissue which enter the placenta are highly vascular, and carry the maternal vessels up to the surface of the chorion. These vessels are, in the simpler forms of placenta, as the diffused and polycotyledonary, simple capillaries, but in the carnivora they begin to form distinct though small sinuses close to the chorion. This is the earliest trace met with of the intra-placental blood-vascular sinus system. This is seen in a higher degree of development in some specimens of the bell-shaped and discoidal placenta. In some forms of the latter, however, the maternal vessels retain the form of capillaries. In the human placenta this blood-vascular sinus system attains its maximum of development. Professor TURNER found in a human uterus of about a month's gestation the capillaries of the maternal mucous membrane at the site of the placenta dilated into large sinuses. This was in an uninjected specimen. Though objections have been raised to inferences as to the structure of the placenta drawn from the results of injection, on account of the extreme delicacy of the vascular walls, and consequent liability to rupture during the process of injection, yet as the results found after injection are uniform, and also in accordance with what comparative anatomy teaches, the value of these objections is much diminished; and, on the other hand, that of the inferences derived from injection is enhanced. Not only do the results of injection of the human placenta point to a blood-vascular sinus system, but on placing a placenta in water, and opening the so-called circular sinus, distinct openings can be seen in the walls of that vessel, and through these openings the villi can be distinguished, and in some cases the villi even pass through these openings into the canal of the circular sinus itself.

In the placenta itself, or the serotina, glands appear to be scanty. They usually open, not into the crypts of the mucosa, but on ridges, or smooth portions of membrane intermediate between the crypts. These ridges or smooth parts of the decidua are apposed to non-villous and less vascular spaces of the chorion. In the human placenta glands doubtless open, in the early periods at least, on the surface of the serotina. In the lower animals, however, with a few exceptions, glands, though seen branching in the connective tissue beneath the crypts, were not seen opening into the crypts, and consequently their secretion did not come into immediate contact with the chorionic villi.

The elaborate researches of Professor TURNER into the comparative anatomy of the placenta, as well as those of Prof. ENCOLANI, of Bologna, support the general view of structure of the placenta known as the Hunterian. They, however, are opposed in several particulars to the view of the development of the organ which has for a long time been accepted, especially the part played by the glands and villi. These researches have placed the Hunterian view of the placenta on a new basis—that of comparative anatomy, for never before had

the minute structure of the various forms of placenta been carefully studied and compared.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of this College, held on Monday last, Mr. Curling's motion respecting the examination for women was withdrawn, as a committee had already been appointed to consider and report thereon. Another motion by Mr. Curling, that no election to the fellowship should be valid unless two-thirds of the members of the Council recorded their votes, fell through.

A letter from Dr. Hawkins, the Registrar of the General Medical Council, formed the chief topic of interest. Dr. Hawkins called the attention of the members of the Council to the large number of rejections of candidates at the professional examinations at the College, and the same thing is considered more or less fully in the letter which Mr. Quain has addressed to the Council of the College. The communications have been referred by the Council to the Court of Examiners; but while it is mere justice that the court should have an opportunity of considering independently the rejections at the examinations over which they preside, it is desirable that this important subject should be thoroughly discussed by all the members of Council, who are likely to take a broader and more practical view than examiners possibly can be expected to do.

In considering the large percentage of rejections at the Royal College of Surgeons of England, and contrasting it with the proportion at the other examining boards, many urgent questions press for solution. It may, in the first place, be asked whether the fault lies with the system of education, or with the system of examination. If with education, in what respect does the medical education in England fail as compared with that of other parts of the United Kingdom? If the high rate of rejections be associated with the system of examination, we have a right to know whether the examinations are conducted on intelligible principles. If the flaw exist in the mode of conducting the examinations and in the plan adopted in appraising the merits of candidates, the sooner a reformation is instituted the better. The tests themselves are, we believe, not too severe, nor the standard inordinately high, but there is, in spite of this, the greatest uncertainty alike in the minds of teachers and students about the results of the College examinations. When we consider that during the past five or six years the teachers in all the metropolitan medical schools have put forth efforts hitherto unknown to prepare their pupils for the examinations, that a system of strict surveillance is practised by not a few teachers who actually take measures to prevent those whom they judge unfit for examination from presenting themselves, and that the average medical student is now better, morally and intellectually, than his predecessors, at least as far as regulations and restrictions can ensure these objects, we are unable to arrive at any other legitimate conclusion than that the mode of testing the knowledge of candidates is either radically wrong or extremely faulty. In the interests of medical education, we ask that this matter shall not be shelved under the delusive hope that the Conjoint Scheme is at hand. This *ignis fatuus* has long enough been an excuse for delay, for prevarication, and for the maintenance of abuses. Needed reforms will hasten rather than retard the advent of the blessings promised by this scheme, and will not materially detract from its value.

DR. CARPENTER ON PUBLIC MEDICINE.

THE address on Public Medicine delivered by Dr. Alfred Carpenter, of Croydon, before the British Medical Association at Sheffield, on Friday, the 4th inst., was eloquent, instructive, and excellently well rendered, and the result fully justified the choice of a man who, though not himself a medical officer of health, has in a practical way probably done as much to forward the cause of sanitation as any man of our time.

The speaker commenced by referring to the statistical work of William Farr as the true pioneer of sanitary labour, in that mortality was shown to exist in defined districts and among defined classes of persons. These statistics, followed up by the philosophical and suggestive papers prepared by or at the instance of John Simon, produced as their outcome a flood of legislation, culminating in a measure that made the appointment of medical officers of health compulsory upon all sanitary authorities. After referring to the necessity that exists for some knowledge of the principles of engineering on the part of sanitary officers, the importance of registering disease as well as death was forcibly shown; and it was maintained that the medical attendant is *not* the proper person to give information as to the existence of zymotic or any other disease. "A medical man, or indeed any other person, is out of place in undertaking a duty which may follow upon, but which is not a part of, the work he is asked to perform by his employer, especially if that work appear to be to the detriment of the latter. It would be morally wrong for a medical adviser to conceal the nature of a given case, if of an infectious character, from the knowledge of his employer, or the responsible head of the establishment in which his employer resides; but the medical man having communicated that knowledge to him, the latter should be the party to give the information to the State, and be responsible to the local authority if he withheld it." This plan was adopted in the working of the Contagious Diseases (Animals) Act, as it was felt that to call upon veterinary surgeons to give the required information would defeat the object of the measure. After an allusion to the Cruelty to Animals Bill, the speaker proceeded to show at some length why the influence of health officers throughout the country is as yet only partial, and their recommendations so often ignored or disregarded, the pith of which was that the country required to be, and, indeed, was being, educated to a proper appreciation of the value of sanitary work. In premising that the first principle of sanitary work is *motion*, the speaker explained the arrangements proper to the construction of sewers, and showed that sewage, to be harmless, must continue in motion and pass on to its destination, that it cannot be retained in a sewer or elsewhere for more than twenty-four hours without producing a chance of evil, and that if a sewer stink there is in some part of it defective workmanship. A very full account of the results obtained at the Croydon Sewage Farm at Beddington followed, the particulars of which have already been recorded in THE LANCET, and sewage utilisation was strongly urged, not only on sanitary grounds, but as affording a large field for the investment of superabundant capital.

There are two canon laws, says Dr. Carpenter, in dealing with sewage. One is that no sewer should have any direct communication between it and the interior of the house, and the other that no water-pipe conveying potable water for use into any house should ever come into direct contact with a sewer or house-drain in any part of its course, especially at the orifice of discharge. These laws are simple and absolute in their character, and cannot be departed from without danger. The reckless way in which plumbers and house-fitters disobey these laws is producing danger to

individuals in all ranks of society. "Sewer-air from imperfectly constructed sewers is laid on to our bed-rooms, dressing-rooms, kitchen departments, and lavatories, as regularly as if it were a necessary of life, whilst the water-pipe is in a thousand instances so placed as to render it perfectly impossible to be used without the contingency of air finding its way to the water from the impurest of impure sources. People reputed to possess common sense do not see the danger of such proceedings, because everyone using water liable to be so contaminated is not affected on all occasions and at all times. They argue that the precaution of keeping water-pipes away from the neighbourhood of sewers is unnecessary, because a fatal result does not immediately follow. They might as well argue that a battle-field is not dangerous, because the hero of a hundred fights died a natural death in his own bed."

The other section of the address referred specially and extensively to zymotic disease, of which the author makes seven classes, all of which were described in detail, and their modes of propagation indicated by representing the several factors in an equation.

In concluding a very able paper, the speaker said—"As zymotic disease has its main impetus in the disregard of duty, those who advocate the performance of that duty must be prepared to encounter opposition and witness an ebb-tide in sanitary work. It is imperfect knowledge on our part which gives strength to opposition. It is our duty to persevere in the prosecution of a more perfect work. Motion as opposed to stagnation, simplicity as opposed to complexity, should be our cardinal points; and if to this we add the peremptory utilisation of animal débris, the sting of epidemic and infectious disease will be taken away."

THE VIVISECTION BILL.

IT is probable that the Cruelty to Animals Bill, in the very modified form now presented to the House of Commons, will become law before the end of the already expiring session. The second reading, which occurred on Wednesday, was introduced by the Home Secretary, who, in a very moderate and painstaking speech, traced the history of the subject, recapitulated the conclusions of the Royal Commission, and announced that the principle of the Bill was simply that certain restrictions would be placed upon all those who performed experiments, that these experiments must take place in a registered place, and by persons holding a licence, that anæsthetics are in all cases to be used, and that the experiments are not to be performed in any medical school or hospital. The changes made in the Bill did not, according to Mr. Cross, interfere with its principle. Special licences, which will not require registration, will be granted to the highest class of experimentalists. Special licences for experiments without anæsthetics will be granted, and also for experiments on dogs and cats. Invertebrate and cold-blooded animals will be exempted from the Bill, and prosecutions under the Act are to be conducted by the Secretary of State, and not by a common informer. Dr. Ward, while protesting against the agitation and the Bill as groundless and absurd, withdrew his opposition. Sir John Lubbock supported the Bill, but Mr. Lowe denounced it in strong terms as a proposal to rank with body-snatchers men of the highest training who had performed the greatest services to mankind. He considered that the entire subject of cruelty to animals should be dealt with in a comprehensive Bill. Dr. Playfair assented to the Bill in its present shape, but referred to the cruelties in all forms that were going on daily and hourly around us, and insisted that the Bill was rather a salve to the wounded conscience of the nation than one boldly dealing with a large and painful subject. After some remarks by Mr. W. E. Forster, generally favourable to the Bill, Mr. Disraeli asked for a decision at twenty-five minutes to six. Dr. Ward's amendment was withdrawn, and the Bill read a second time. The Committee is in the orders of to-day (Thursday), and its further progress will probably be unimpeded.

The debate on this Bill will be read with great interest. The Government has educated itself amazingly in this matter. There are many people who actually believe that, under the name of vivisection, physiologists, and even medical students, are engaged in cutting up animals alive to see what is going on in their bodies. The absurdly exaggerated and untruthful statements that have been bandied about for some time were brushed away like so many cobwebs by the debate, and it was clear that the House felt in this matter that there were a large number of unregarded cruelties perpetrated under the name of sport, without the pretence even of having been inflicted for other than selfish ends. The Home Secretary took care to guard himself against any implication of cruelty as far as the medical profession was concerned, and he, very skilfully—for the purposes of debate—sheltered himself behind the resolutions that had been passed by the British Association in Edinburgh in 1871, declaring that for all practical purposes the Government Bill would simply give effect to and carry out those resolutions; and there can be no doubt that this Bill, as it now stands, is very different from what it was originally.

FRENCH WATERING-PLACES.

FOR some years there has been an increasing influx of English visitors, during the autumn months, to the various seaside resorts of the western coast of France. That such should be the case we do not wonder, for a French watering-place has attractions far above any that its stolid English rivals can offer. The "establishment," together with the numerous fêtes, with which our neighbours always contrive to enliven and entertain their visitors during their sojourn, are decidedly in advance of the dreary promenade on the pier or esplanade, or the local regattas, that are the chief excitements on which we rely on this side the Channel; whilst to many the complete change of scene, air, and diet are positive advantages. But whilst admitting that the French watering-places are generally more attractive than our own, there is one point in which we are undoubtedly superior. We allude to the defective sanitary condition of most of those towns. We have no hesitation in saying that in this alone the average English watering-place is immeasurably superior to even the highest-class resort of the same kind in France. On landing at many of these towns, we are assailed with odours that are certainly foreign to English noses; nor do they alone pervade the streets, since we speedily find them equally prevalent in the dwelling-houses. These odours are the result of imperfect drainage, that provided for the surface and refuse matter being generally insufficient, and only inadequately supplemented by scavenging; whilst the excreta of the houses are received into cesspits or fosses, which are certainly not too frequently cleared of their contents. A brief experience of a French "cabinet" informs us that the cesspit beneath is unventilated, except by the soil-pipe, and that the occupants of the house are receiving the full benefit of the gases arising from the decomposing fæcal and urinary matters that have been long collecting. The water-supply at many of these towns, too, is exceedingly dubious, as those can testify who have had occasion to apply the rough test of taste and smell. English visitors, after a few days abroad, usually experience a sharp attack of diarrhœa, which is generally attributed to the use of red wine and

French cookery. That these produce diarrhœa we do not dispute, but certainly not to the extent that is generally supposed. Many cases of diarrhœa acquired on the Continent have come under our observation, and certainly, as a rule, they were not the simple diarrhœa of indigestion, whilst some were accompanied with definite pyrexia. We fear this year the danger is likely to be increased. Prices everywhere have risen, and people who a few years ago were paying eight francs a day at an hotel are now asked twelve for the same accommodation. Consequently we hear of many who are resorting to the smaller and less frequented watering-places, where prices are still moderate. These towns, however, it is to be feared, are in even a worse condition than their old-established neighbours, where English opinion has effected something towards removing some of the worst nuisances. We do not wish to raise an unnecessary alarm, but we think it quite time that attention was called to the very serious deficiencies of these places. We strongly urge persons who intend to spend their autumn holidays at one of the French watering-places to take a few precautionary measures. They should see that the cesspit of the house or hotel is cleaned out, and they should avoid drinking ordinary water unless previously boiled and filtered. They should also avoid the older parts of the town, nor frequent the harbours and quays at low water.

EPIDEMIC DISEASES IN SCHOOL-SHIPS.

IT is satisfactory to know that the recent epidemic of scarlatina on board H.M.S. *St. Vincent*, at Portsmouth, has passed over without any mortality. The pronounced, as well as all suspected cases, numbering more than a hundred, were taken away from the ship, and received at Haslar Hospital a few hours after the outbreak was reported at head-quarters. Much praise is due to Inspector-General Smart and Deputy Inspector-General Pickthorne on account of the admirable way in which all necessary arrangements were made and carried out to prevent the progress of the epidemic. Six or eight convalescent cases only now remain in hospital. Scarlatina has, however, broken out very recently on board H.M.S. *Impregnable*, the training-ship at Devonport, and numerous cases have been removed to hospital. Having regard to the fact that these outbreaks of zymotic disease are constantly occurring in school-ships and training-ships, including vessels of the Royal Navy, about which no expense is spared, it becomes a serious consideration whether the Government is justified in sanctioning the increase of these establishments by lending old men-of-war for charitable purposes. The last half-yearly report issued by the City Corporation, as sanitary authority of the port of London, gave particulars as to a most disastrous epidemic of enteric fever that occurred last year in the school-ship *Cornwall*, and it is also stated that some variety of zymotic disease has been epidemic in one or other of the Thames school-ships every year since this sanitary authority commenced its work. The condition of these old ships when handed over from the dockyard is often, in a sanitary sense, far from satisfactory; and there is abundant evidence in the report above quoted to show that most of them are fitted up haphazard, with little or no regard to the first principles of health. Lumber is left and allowed to accumulate in the hold, no special ventilation is provided for the latter, and so it is obvious that, in many instances, a lot of boys are crowded together, and live and breathe over a confined air-space that is really, as to the quality of air engendered and sent up for them, little better than a sewer or a cesspool. This state of things, of course, does not exist on board any of the Navy training-ships; and the Royal cadet-ships *Britannia* and *Hindostan*, at Dartmouth, are splendidly clean and very completely ventilated below as well as above. But if, as appears to be the opinion of the public as well as of the Government, school-ships are to be encouraged and increased, some definite style of fitting up should be officially insisted upon, or these establishments will prove a curse, rather than a blessing, both to their denizens and their supporters.

ARMY MEDICAL SERVICE.

WE continue to receive numerous communications from India and this country relative to the new Medical Warrant. They, one and all, express dissatisfaction with Mr. Hardy's new scheme, and declare the terms proffered for service in India, where good pay is almost the only possible compensation for hard work and exile, to be quite inadequate. There is no increase of pay provided by the new Warrant, under the very conditions where such increase was most needed—that is, in India; and the declension in value of the rupee has, of course, much reduced the value of Indian pay. If people are tempted to that country in the hope, as it has been expressed, of shaking the Pagoda-tree they will find themselves disappointed. The present financial condition of India is a matter of grave difficulty. The short-service system has not been well received by either the medical or military journals. It has always been clear to us that in order to succeed it must be a well-paid service, and this is just where it has broken down. If Mr. Hardy could boast of his anticipated saving of £50,000 per annum by his new method, the Government could have very well afforded to pay young medical men in India something more than £250 per annum *plus* the allowances of a lieutenant. Money is always acceptable, of course, and the existing members of the Medical Department are not likely to look slightingly on an increase of pay, but it has always been represented that the discontent did not by any means altogether turn on a question of money. A feeling has been growing up for years past that the position of doctors in the public services was not what it should be, and that faith has not been kept with them. A spirit of distrust has arisen in consequence. The succession of Warrants and War Office Circulars, one after another, and one above another, represented an official game of leap-frog that neither the medical officer nor the profession could understand. It is improbable that this short-service system will relieve the Government of its difficulties, and still more improbable that it will last for ten years, and effect the saving that was anticipated.

HEAT AND MORTALITY IN NEW YORK.

DURING the three weeks ending the 1st, 8th, and 15th July, the heat in New York was excessive, the mean temperature of the three weeks being successively 81·1°, 83·1°, and 83·9° F. In London the hottest week this year was that ending the 22nd of July, when the mean temperature was not more than 70·5°. The deaths in New York at all ages, in the three weeks above-mentioned, were 636, 858, and 1298 respectively. The 1298 deaths reported in the week ending the 15th July were equal to an annual rate of 63·8 per 1000 persons estimated to be living in the city. They included 622 referred to diarrhœal diseases, and 105 to sunstroke or the direct effect of solar heat. Of the 622 deaths from diarrhœal diseases, 596, or 96 per cent., were of children under five years of age; in London, during the week ending the 29th July, the 549 deaths from diarrhœal diseases included 519, or 95 per cent., of children at the same ages. The deaths of infants under one year of age in New York in the week ending the 15th July were 649, and were exactly equal to 50 per cent. of the deaths at all ages; in London, during the last week of July, when

diarrhœa was most fatal, 45 per cent. of the deaths at all ages were of infants under one year of age. The intensity of the heat in New York during the week ending the 15th July may be imagined from the fact that the thermometer in the shade rose above 90° on four days in the week, and to 98° on the 9th. At the Royal Observatory, Greenwich, the highest readings in the shade were 94·0° and 90·2° on the 17th and 22nd July. As the New York returns of mortality do not furnish either the number of births in that city or the estimated number of persons living at different ages, it is not possible to compare satisfactorily the effect of heat upon the mortality of infants in New York and London.

MEDICAL OFFICERS OF HEALTH.

DR. CAMERON raised a question in the House of Commons some few days ago as to permanency of appointments in the case of medical officers of health. The President of the Local Government Board indicated, in reply, that the five years' term was made experimentally, and that permanent appointments were now sanctioned when the officer was monopolised, but that the "five years rule" would be found convenient under other circumstances. This reply strikes us as a lame way of settling (or endeavouring to settle) for the moment a question equally important to sanitary authorities and medical officers of health. It is well known, in spite of Mr. Sclater-Booth's sedative and apparently reassuring reply, that several districts, the authorities of which combined some three years ago in appointing an officer, have at the expiration of the term broken asunder, destroying the combination and at the same time the prospects of their medical worker. We are credibly informed that several other combinations are likely to collapse, partially or entirely, after the same fashion, when the original probationary term has expired. How is it possible, under these circumstances, to expect that good men will present themselves for these appointments? Their salaries may be sufficient or even liberal, but it is a farce to suppose that skilled specialists can be obtained for a post that may be determined by caprice or personal hostility at the end of a short period of service. This, however, by the way. Before Mr. Sclater-Booth attempts to secure permanency of service, he must turn his attention to the somewhat serious work of redistribution. Combination obtains in some parts of the country, and single appointments in others, the former being for the most part officered by men well fitted for the work, and the latter by general practitioners, who are paid annual sums varying from five to twenty pounds to do as little as possible. The sanitary work of the rural districts cannot be properly performed until the country is uniformly parcelled out into large areas, with a monopolised medical officer of health as chief, and parochial surgeons as assistants; and the county has always been considered by competent judges to be the most convenient unit and basis of arrangement. When this reform has been achieved, the permanency of appointments of health officers ought to be at once secured, subject to the discretion of the Local Government Board.

HEALTH AT THE SEASIDE.

MANY considerations influence us in the choice of the watering-place at which to spend the autumn holidays—accessibility, economy, scenery, and society; but how few consider the chief desideratum—health. We leave our own house, which we have rendered tolerably perfect in sanitary arrangements as far as our lights go, and trust ourselves with confidence to the mercy of the municipal authorities of the Baie we have decided to visit. We do not ask where is the outlet for the sewage, nor what is the nature or character of the water-supply. Materfamilias, after satisfying herself as to the average nature of the domesticities provided by the landlady, never thinks of inquiring—When was the cistern cleaned out? Are the closets ventilated? Are the house-drains properly constructed, and is the water efficiently trapped or disconnected? Yet these are points that materially affect our health and comfort. There was a time, not long since, when the authorities of our seaside resorts utterly ignored all sanitary precautions. Their visitors were allowed to bathe in the diluted sewage of the town, which passed directly on to the beach in view of the windows of the parade, whilst every flow of the tide drove the sewer gases back into the houses, and out of the gully-holes in the streets. This state of things has for most watering-places happily passed away. Sanitary authorities have begun to learn that repeated outbreaks of scarlet fever, &c., give their towns dangerous reputations and consequent withdrawal of patronage; whilst the publication of the Registrar-General's death-rate returns of the chief watering-places has engendered a wholesome competition among the authorities to reduce their death-rates.

Acknowledging the great improvement that has been made of late years in regard to drainage and water-supply, much still remains to be done. Our readers will call to mind the reports our Sanitary Commission have recently issued with respect to some of our chief watering-places, where the shortcomings of each are plainly stated. Such being the case, we strongly urge the public to use some discrimination in the choice of a seaside residence, and to be guided more by hygienic considerations than by matters of convenience or amusement. No benefit, set aside the expense and trouble, can accrue from a "change at the seaside," however bracing the air, if the sewer gases are allowed to enter the houses, or the sewage discharged on the beach near the town, or where the water-supply is insufficient and likely to be contaminated. To those who have not made up their minds where to go for their annual holiday, we advise a perusal of the Registrar-General's Returns for the last few years, especially the return for the autumn quarter of last year, where the reader can gather much valuable information respecting the probable sanitary condition of the English watering-places at the most crowded season of the year.

SURGEONS FOR THE SERVIANS.

DR. MUNDY, an Austrian, who is surgeon-in-chief of the Servian army, writes from Belgrade, under date the 1st instant, to the military surgeons of his country. It is an earnest appeal to his colleagues to enter the Servian hospitals and treat the wounded. "I can promise you," he says, "the heartiest welcome, and I can assure you that your pathological and surgical experience will gain largely, whether in our ambulances or hospitals. What you will learn here will not only be of benefit to future Servian wounded, but also, sooner or later, to the wounded and the sick among our own countrymen."

THE EPIDEMIC IN FIJI.

WE were very glad to read the explanation given by Staff-Surgeon Goodman, of H.M.S. *Dido*, of the part he took in the disastrous occurrence to which we last week referred. That there was a lamentable amount of ignorance and want of judgment displayed there can be no doubt, but the medical officer points out that the responsibility of subjecting the natives of the Fiji Islands to the ravages of infectious disease did not rest with him. It is the authority on shore that makes and applies the quarantine regulations, and it is alleged that the captain of the ship made known to those on board the administrator's boat the existence of

measles on board as soon as the boat neared the *Dido*. Notwithstanding this the boat came alongside, and Mr. Layard and the Colonial Secretary, without conferring with the surgeon, came on board, but not without their being made acquainted at the gangway with the particulars. No reference, however, was made by the colonial authorities to Dr. Goodman as to the detention of the natives on board the ship. While we think that the colonial authorities are responsible for what followed, it appears to us that, somehow or other, sufficient care was not taken to make Mr. Layard and the Colonel Secretary sensible in plain and unmistakable language of the great importance of the interests at stake, and of the risks that would be incurred by the course which they adopted.

HEALTH OF BIRMINGHAM.

A REPORT of the health of Birmingham for the quarter ending July has been published by Dr. A. Hill, medical officer of health. There was a considerable reduction of mortality in the period as compared with previous quarters. Dr. Hill points to the gratifying circumstance of the disappearance of small-pox from the town after its continuance in an epidemic form for more than four years, and says it cannot be doubted that it is the gradually induced result of a more active system of vaccination, and the employment of other measures, not forgetting "the dangerous and costly protection obtained by the susceptible portion of the inhabitants having taken the disease, and so ceased to be dangerous either to themselves or others." The danger, however, still exists, and it only requires a return of the favouring conditions, more especially non-vaccination, to bring about another severe visitation of the disease. It is hoped that the lesson received by the town will be effectual in conquering all opposition to vaccination. Dr. Hill analysed eighty-six samples of water taken from various surface wells in different parts of the town, and the results showed them to be very impure, and unfit for domestic use. Many of the contaminated wells will be at once closed.

THE EAGLEY EPIDEMIC.

MR. W. H. POWER'S report to the Local Government Board on the epidemic of enteric fever, which recently prevailed at Eagley, was issued on the 4th inst. It appears that of fifty-seven families in Eagley supplied with milk from a particular dairy, fifty-five were attacked by fever, while of 261 other families in the same district supplied from other sources (or not taking milk) eight only were attacked. In six of these eight families, however, the members attacked had, prior to their illness, partaken of the milk in question; in another of the eight the disease, though called "fever," had not been medically recognised as such, and the origin of the malady, whatever it may have been, could not be traced; and the last of the eight exceptional cases occurred later, and was referred by the medical attendant to drinking contaminated water, possibly infected by pre-existing cases of fever. On the whole, it appears to the reporter that the epidemic is one more of the cases which point to the urgent necessity for the regulation of the sanitary arrangements of dairy farms.

TRADE DISEASES.

DR. J. C. HALL, in a paper read before the British Medical Association at Sheffield, called attention to the diseases arising from certain trades in the town, with special reference to inhaled irritants. There are three kinds of grinders at Sheffield—wet, dry, and mixed—and it appears that the most fatal kind of work is razor, scissor, and fork grinding. Particles of grit are frequently discovered in the lungs of those who had died of grinder's disease, but the speaker had never, even after the most careful microscopical examination, detected a particle of steel. The appearance of a dry-grinder's lungs and bronchial glands was illustrated by diagrams. The report stated that no less than 111 of this class of grinders died in Sheffield last year. Dr. Hall considers, however, that a properly constructed fan in a well ventilated room will render the dust perfectly innocuous, by causing it to be driven off as fast as formed, and carried up a shaft to the outside of the building. Boys under ten years of age are now, by legislation, prevented from working at the grinding mills. Papers of an analogous kind were read at the same meeting by Dr. Purdon, on the injurious effects produced on the lungs by flax and dust; by Dr. Beveridge, on the occurrence of phthisis in granite masons; by Dr. Elam, on the presence and tolerance of foreign matters in the lungs; and by Dr. Arlidge, on potter's disease from inhalation.

INFANTILE DIARRHŒA.

UNDER the influence of the more moderate temperature that had prevailed, the fatality of diarrhœa in London showed a slight decline in the week ending the 5th instant. The deaths referred to this disease, which rapidly increased from 116 to 522 during the four weeks of July, declined to 401 in the first week of August. With reference to the relative fatality from the disease in different parts of London, the Registrar-General remarks in his last Weekly Return that the annual death-rate from diarrhœa during the four weeks ending the 5th inst. was equal to 4·9 in the central, 5·2 in the south, 6·1 in the west, 7·0 in the north, and 7·1 in the east, groups of registration districts. It is worthy of note that this diarrhœa fatality appears to show no definite relation to the density of population. For instance, the recent death-rate from diarrhœa was lowest (4·0 per 1000) in the central districts, including St. Giles, Strand, Holborn, and the City, which had an average density of 150 persons per acre in 1871. While in the north districts, where the density of population in 1871 was but 56 persons per acre, the recent diarrhœa rate was as high as 7·0 per 1000. The central districts, moreover, contain a population far poorer than that which inhabits the north districts.

EMIGRATION AND IMMIGRATION.

FROM the official report on this subject, recently issued by the Board of Trade, it appears that during the past year the total emigration from the United Kingdom to places out of Europe amounted to 173,809 persons, including foreigners in transit. The total immigration is represented by 94,228 persons. A further analysis shows that by deducting foreigners, and then comparing British emigrants with immigrants, the net emigration by persons of British origin only amounted to 46,447 souls, the lowest recorded for the past thirteen years. No particulars as to mortality and sickness during the voyages are given.

THE HEALTH OF RAMSGATE.

REPORTS having been circulated that scarlet fever was very prevalent at Ramsgate, the medical officer of health of the town, Mr. James Barry, has written to *The Times*, stating the true facts of the case. These ought to be sufficient to allay any feelings of alarm, and Mr. Barry has consulted the best interests of the town in making them publicly known. A rumour that scarlet fever is prevailing in a watering-place is sufficient to create a panic, whilst we think the most timid can hardly take alarm when they are informed that the epidemic is at present confined to five

persons, out of a population, not including visitors, of 23,000. Although Mr. Barry's statement may be considered, at present, completely satisfactory, it will be his duty to keep the public informed of the progress of the disease, and if there be the slightest indication of its extending, to sound a note of alarm. We are quite convinced that frankness in these matters is not only the best, but also the most paying policy, the confidence that it engenders contributing largely to the subsequent prosperity of a health resort.

THE last Quarterly Report of the Registrar-General contains information relating to the recent outbreak of small-pox in Southport up to the 29th July, at which date the prevalence of the disease was rapidly declining, a result which may be mainly attributed to the ample hospital accommodation for the treatment of the disease provided by the Town Council as the urban sanitary authority. It is, however, to be seriously regretted that the Town Council of Southport still refuse to admit reporters to the meetings of their Health Committee, or to publish the weekly reports of their medical officer of health. It would, undoubtedly, be to the interest both of the town and of the public, especially at a time like the present, that really authentic information as to the health of the town should be readily available. In the absence of such information, it is only natural that vague and exaggerated rumours should obtain credence in some quarters, to the great injury of the town. Reticence in sanitary matters is not only out of date, but is distinctly mischievous.

A CORRESPONDENT of the *Pall Mall Gazette* reports that an inquest was held at Sidmouth on Wednesday on the body of an infant aged eleven months, which died from an overdose of opium. It was suffering from diarrhœa, and the mother sent to a chemist for a mixture. She was supplied with a bottle of medicine, with instructions to give a teaspoonful every four or five hours. Her teaspoons were, however, twice as large as those in general use. Hence the overdose of opium, amounting to one-sixteenth of a grain, which proved fatal. The coroner commented on the danger of not defining doses of medicine by a safer standard than that of a teaspoon, as teaspoons vary so much in size. The jury returned a verdict of "Died from an overdose of opium." It would be well if chemists, if they will prescribe, would abstain from administering opium to children under any circumstances.

THE urgent necessity which exists for a Rivers Pollution Act is shown by the following instance, cited by the *Local Government Chronicle*. It is the custom among cloth workers to collect largely pigs' dung and urine for the purpose of dressing their manufactures. When the cloth has become saturated with that mixture it is washed with soap, and the entire compound is then allowed to flow into the stream without subsidence or cleansing treatment of any kind being resorted to. It is within our contemporary's knowledge that one manufacturer in Yorkshire receives a stream perfectly pure, and pollutes it in such a manner that it becomes utterly unfit for any purpose whatever after it has received his refuse.

WE observe that at the recent railway accident at Long Ashton, a medical student at the Bristol General Hospital, Mr. F. B. Pullin, a son of Dr. Pullin of Sidmouth, rendered most valuable services to the injured persons. The local papers speak in terms of unqualified praise of his presence of mind and promptitude. Mr. Pullin has before this on different occasions rescued four persons from drowning, more than once under circumstances of great danger to himself.

THE Macclesfield sanitary authority appears greatly disinclined to consider the question of providing the town with an infectious diseases hospital, the necessity for which has been repeatedly urged by the medical officer of health. Meanwhile, there is an increasing rate of mortality in the town from this class of diseases, the deaths for some time having exceeded the births—a circumstance which should always be regarded with anxiety. It appears that nearly a fourth of the whole mortality occurs among infants, who perish largely from an epidemic of measles; while small-pox, whooping-cough, and scarlet fever add their quota of victims. Small-pox has been prevalent for a considerable time, and it now presents a threatening aspect. A local newspaper publishes an article soundly rating the sanitary authority for its neglect to provide the requisite hospital accommodation, and forcibly pointing to the fact that the prevailing death-rate is the highest ever recorded in Macclesfield.

WE find that the Bath Guardians have very wisely rescinded the resolution passed on the 5th inst., allotting the medical officer £30 per annum wherewith to provide whatever wine or brandy might be needed by the paupers at the workhouse. It is a grim satire on the conceivers of the resolution that the Inland Revenue officers, on being communicated with, said that the medical officer could not supply the wine and brandy without a licence, and that a licence would not be granted under such circumstances. Boards of guardians in other parts of the country who contemplate turning their medical officers into spirit merchants would do well to make themselves acquainted with the legal aspect of the question before finally committing themselves to a resolution.

WE are glad to find that the City of London Union Board of Guardians have adopted the plan of giving their poor Liebig's extract of meat medicinally. It will be supplied by the dispenser at the dispensaries upon the written order of the out-door medical officer. The proposal met with some opposition at first, but eventually was carried. There is a great deal to be said in favour of the plan, and we have little doubt it will be followed elsewhere. Care, of course, should be taken to secure the genuine article, as there are many inferior imitations of Liebig's extract which contain very little nutritious elements.

AT a discussion which took place at a recent meeting of the Solihull sanitary authority, on a proposal to "disestablish" the combined sanitary district, Mr. Henley, Local Government Board Inspector, who was present, said that nothing had shaken the opinion he expressed in 1872 that amalgamation, both for economy and efficiency, was the only way of working the Sanitary Acts. They could only get a thoroughly independent medical officer by joining with other authorities in his appointment, and no more fatal mistake could be made than withdrawing from a combination once formed.

THE Bombay newspapers are in some alarm lest cholera should reach that port. The native craft, that arrive in large numbers from the Persian Gulf, are subjected to medical examination, but it is hinted that the inspection is not as thorough as it should be, and that, moreover, the police are elevated to the dignity of medical inspectors.

AS we expected, the Local Government Board, when the question of the dismissal of Dr. Deville was submitted to it, decided against the Harrogate sanitary authority. We hope Dr. Deville will now be reinstated in the office from which he was ousted.

THE rate of mortality in London last week was 25 per 1000 annually. The deaths, 1676 in number, included 1 from small-pox, 21 from measles, 36 from scarlet fever, 9 from diphtheria, 38 from whooping-cough, 16 from different forms of fever, and 401 from diarrhœa. The death from small-pox occurred in the Stockwell Small-pox Hospital. Different forms of violence caused 63 deaths. Eleven cases of suicide were registered. In the Outer Ring fatal cases of diarrhœa were very numerous in Isleworth, Willesden, Hornsey, Tottenham, Edmonton, Stratford, and West Ham.

THE Kensington Guardians, on the application of Dr. Dudfield, medical officer of health, have consented to remove non-pauper cases of small-pox occurring in the parish to the Stockwell Hospital conditionally on a certificate being granted that the patient is fit to bear the removal. As it does not seem to be known what the Local Government Board will say to this arrangement, the guardians have decided that it shall last for three months only. Meanwhile they have communicated with the Central Board.

ON the 18th of August will begin the fifth session of the French Association for the Advancement of Science, to be held at Clermont Ferrand, in the Department of Puy de Dôme, the most picturesque country of the centre of France. Many leading medical men of Lyons are to read papers in the Section of Natural Science. Several interesting excursions are planned—one in particular will be in connexion with the opening of the meteorological observatory built on the mountain of Puy de Dôme.

AT the Quarterly Court of the Governors of the Hospital for Consumption, Brompton, Mr. John Marshall, F.R.S., was unanimously elected consulting surgeon to the hospital in the place of Sir William Fergusson, who has been compelled, on account of the present state of his health, to relinquish the office. The receipt of several fresh legacies were announced. We would again ask what is being done with the sum of £100,000 left to the institution by the eccentric lady who lived in Blackfriars?

THE appointment of the medical officer of health at Liverpool continues to give great general dissatisfaction both among the laity and the professional men in the town. A strong protest against the appointment was made at a public meeting held on the 31st ult., and it was resolved that a memorial on the subject should be forwarded to Mr. Rathbone, the senior member for the borough, for presentation to the Local Government Board.

DR. FRANKLAND reports that the summer quality of the river waters of the metropolis was maintained last month, but those delivered by the Southwark and Lambeth companies were markedly inferior to the others. The temperature of some of the samples examined as they issued from the mains was as high as 70·7° F. In such a condition water must be most unpalatable.

IT is fully expected, from what we hear, that the next examination for the military medical services will serve to indicate the popularity of the Indian Medical Service with the profession as compared with that of the British Service, the rumour being that there are a large number of candidates for the former service.

THE Roman Academy of Medicine has received from the Minister of Public Instruction the yearly grant of 4000 lire (£160), for the purchase of the *matériel* of medical investigation, and for the promotion of medical science generally.

THE medical officer of health for Marylebone has issued his annual health report. He states that, in spite of the sanitary work performed within the last twenty years, there has been no diminution in the death-rate, either in his particular district or taking the whole of London.

SMALL-POX continues to increase in Manchester, while many cases of scarlatina continue to be reported. Enteric and other forms of fever are, however, diminishing considerably. The average death-rate of the town is 28 per 1000 annually, and the birth-rate 32·7.

WE understand that the medical practitioners of the Barton and Eccles district have, with one exception, agreed to report the occurrence of any infectious disease which may come within their observation to the local sanitary authority.

A VIOLENT outbreak of small-pox has occurred at Blackburn. There are from ten to twenty cases in the workhouse, and a temporary hospital is being provided for further cases.

THE Chamber of Deputies has authorised the founding of a chair of Mental Diseases. It is to be forthwith occupied, but the name of the successful candidate is not yet known.

WE understand that the reference of any questions between Sir William Gull and Dr. Johnson in regard to the Bravo case took place at the instance of Sir William Gull.

Correspondence.

"Audi alteram partem."

"HOUSE-DRAINS AND ILL-HEALTH."

To the Editor of THE LANCET.

SIR,—In an article on house-drains in your journal of July 29th, you call attention to a hiatus in sanitary legislation which renders a very large portion of the sanitary work of an urban health authority mere waste-paper, and the implied security a delusion and a snare.

You suggest, "that, in addition to the proposal (of the Society of Arts) to submit the plans of house-drains and connexions to the local authority, power should be given to the authorities to appoint an inspector to see that all such sanitary work was properly carried out."

In confirmation of the opinion expressed, and in illustration of the pressing want you have pointed out, may I relate a sanitary exposure which has recently come before my notice?

A lady took on lease a newly-built semi-detached house in Leeds, rent £80. The house had been inspected by a land surveyor, had been found to be dry, and had been passed as satisfactory. In a few weeks the cellar and kitchen walls became wet, and the house was pervaded by a smell of drains, and in four months seven out of a family of nine were ill with febrile attacks, high temperature, sore-throat, swollen cervical glands, and enlarged tonsils. The two maid servants were each laid up twice in a short period.

The illness suggested defective drains, and, under the pressure of the medical attendant, the following defects were discovered, much to the annoyance of the landlord:—

Defect No. 1.—The main drain, nine-inch tubes, was laid *immediately against* the outer wall of the house, and twelve inches above the level of the kitchen floor.

Defect No. 2.—These drain-pipes had *no fall*, the joints were not made good, and the sewage freely escaped into the ground, saturating the kitchen wall and the soil under the kitchen floor.

Defect No. 3.—The branch drains for sinks and water-closets were *built into the wall*, and the lead delivery-pipes

were simply turned into these drain-pipes, without any attempt whatever at connexion having been made. In two instances an inch and a half pipe was turned into a six-inch pipe, thereby allowing ample space for the untrapped sewer gas to escape into the house.

Defect No. 4.—The overflow-pipe from a cistern, and the waste-pipe from a lavatory, were connected to an untrapped, unventilated soil-pipe, and through these untrapped pipes the sewer gas was literally blowing into the house.

Every one of these sanitary defects is in direct violation of the building bye-laws of Leeds. The plans of every new building or of any alteration of an old building have to comply with the bye-laws, and are passed after careful inspection by the surveying authority. And what next? Dishonest speculators, dishonest builders, dishonest contractors may scamp every sanitary requirement, as no effective machinery is provided to secure that these requirements ever reach any stage beyond the paper on which they are drawn. Houses are built, and let, and sold, for what the speculators can get out of them, and in nine cases out of ten the sanitary flaws are not discovered until they have worked their natural results in the illness, or perhaps the death, of the unfortunate tenants. Scamped drain-work is one of the most dangerous, one of the most common, and one of the most difficult to detect of the sanitary flaws of new buildings, and is rarely found out except by the illness it produces. We must not rest content until it shall be compulsory on every sanitary authority to provide that the laying of every drain shall be watched from beginning to end by a competent inspector who has the independence, the courage, and the honesty to compel, in every case, sound, reliable workmanship.

I am, Sir, yours faithfully,

Leeds, August 3rd, 1876. T. PRIDGIN TEALE.

PREGNANCY WITH UNRUPTURED AND IMPERFORATE HYMEN.

To the Editor of THE LANCET.

SIR,—Thinking that the following notes of a case of pregnancy and commencing labour complicated with an unruptured and imperforate hymen, may be interesting to your numerous readers, I beg to forward them to you for insertion should you think them worthy of a space in your journal.

On the 25th of last month I was sent for to see a patient who stated that she was unmarried, that she had ceased to menstruate since last December, and that from that time her abdomen had gradually increased in size. She was now evidently in labour; her uterus, from its size, apparently containing a full-term child. An abdominal examination gave all the signs of pregnancy at full term, and her labour-pains were strong, regular, and occurring every ten minutes. On attempting to make a vaginal examination I could not introduce my finger more than one inch beyond the orifice, where it came on a tough resisting membrane. The external parts up to this membrane were rather dry, and my finger was not stained with blood. I introduced a speculum, and then discovered a complete hymen stretched across the vagina, having a median raphe, with a small hole in the raphe at about the junction of the middle with the anterior third of its distance in the conjugate diameter. The opening was about the size of the urethra, and from it flowed a little normal blood and about a wineglassful of fluid looking more like aqueous humour than anything else. I feel persuaded I made the hole myself when introducing the speculum, as up to that time neither blood nor discharge of any kind could be detected in the parts below the membrane. I sent for the house-surgeon (Mr. Edwards), and with his assistance the patient was placed on her back, and, a catheter being first introduced into the bladder, a pair of scissors was inserted into the opening in the hymen, and the membrane afterwards torn by the introduction of two fingers. The fœtal head could then be felt dilating the cervix uteri to about the size of a florin. The patient was then sent home in a cab, and about three hours afterwards was delivered of a healthy male child. I should state, that though the hymen was quite perfect, the caruncule myrtiformes were very plentiful all round this septum about one-eighth of an inch from its point of union with the vaginal walls.

The girl, after repeatedly disowning any knowledge of her condition, confessed to having had sexual intercourse about last November. Connexion, she said, was very painful and difficult. Her catamenia had been regular all her life up to this pregnancy, and she volunteered the statement that her sufferings at those times were quite as great for three days as her pains when I had seen her in labour.

Professor Gustave Braun, of Vienna, published (*Wien. Med. Woch.*, March 25th and April 1st) three cases of pregnancy with unruptured hymen. These cases are to be found transcribed into the *Medical Times and Gazette* of May 20th, 1876. But these examples differ from mine, inasmuch as though the hymen was in these three unruptured, it was in none imperforate.

I would suggest that ever since last December, not having menstruated, the small opening which she must have had at the time of sexual intercourse had had time to close by healing, and it is not, perhaps, too much to presume that the pain at her menstrual periods, which, by-the-by, was worse on the day preceding the discharge, was due in great part to the fact of the imperforate character of the hymen, which had closed over since the previous catamenia four weeks ago.

I remain, Sir, yours truly,

E. J. BURGESS, M.R.C.S.E., L.R.C.P.L., & L.M.,
Midwifery Assistant, St. Bartholomew's Hospital.

August, 1876.

THE BRUSSELS EXHIBITION.

(From our Special Commissioner.)

No. III.

IN the last letter I dwelt especially on the exhibits in Classes 4 and 8. I now propose to give some account of the exhibits which are of a purely hygienic description, and which are included in classes

5. Hygiene and public health.

6. Industrial hygiene. This class includes not only such things as miners' lamps and protective masks, but also apparatus for lessening the risks with machinery of all kinds.

7. Domestic and private hygiene.

9. Institutions having for their object the amelioration of the condition of the working classes.

10. Hygiene in its relations to agriculture.

I need not weary the reader with a detailed description of all these classes, but shall merely mention anything which seems worthy of attention.

While looking at this large and important show of domestic and other sanitary appliances, it struck me as a remarkable fact that the arrangement of the Exhibition had not been by *class* rather than by *nation*. There is little in common between the things which are placed, very often side by side, except the not very important fact that they were made in the same country. If all exhibits in the same class had been ranged together, the process of comparison would have been much easier, and the instruction conveyed by the show would have been so much the more forcible. Assuredly hygiene is one of those sciences which, like anatomy and theology, is susceptible of comparative study. The conditions of life in one country differ essentially from the conditions of another, and certainly much information may be conveyed by one nation to another by displaying the method of invoking the benign influences to counteract the malign ones. Thus Germany, surrounded by dangerous enemies, has not only learnt the art of war, but also has reached great perfection in alleviating the sufferings of the wounded soldier, as I had occasion to point out in the last letter. Russia and the Scandinavian countries are compelled to be very economical in their employment of fuel, and consequently they are far ahead of us in the science of warming their houses and the careful conservancy of heat. Holland and Switzerland, so widely different in their geological configuration, present to the engineer very different problems in the matter of drainage; while England,

the land *par excellence* hitherto of coal and iron, has naturally shot ahead in such things as railway signalling (and indeed Messrs. Saxby's show is one of the best exhibits in the whole Exhibition) and the hygiene of the coal mine. It is in an exhibition of this kind especially that the nations can teach each other, and it is to be hoped that visitors will go in a frame of mind to receive instruction, to make notes, and to bring home new ideas.

Milburn's machine for the profitable utilisation of fæcal matters is one of the most important exhibits in the English section, and is sure to attract attention. The principal characteristic of the system is the *drying* of the material by rapid evaporation, and the machine exhibited is said to be able to produce from twenty-five to thirty hundredweights of dry manure daily from ordinary fæcal excreta, and with the expenditure of about sixteen hundredweight of fuel. By an ingenious process the gases which are necessarily given off during the evaporation are forced through a furnace, and thus all offensive and dangerous qualities are destroyed. In order to prevent waste of nitrogen and fix the ammonia, a small quantity of sulphuric acid is added to the fæcal matter before the heat is applied. An analysis of the manure, made by Dr. Voelcker, gives the following result:—

Water	10·49
Organic matter and ammoniacal salts ...	59 69
Calcium phosphate	5 12
Oxides of iron and aluminum	5·72
Calcium sulphate	9·19
Calcium carbonate	2 01
Alkaline salts and magnesia...	1·93
Insoluble silicates	5·85
	100·00

It is said that farmers are ready to give seven and eight pounds a ton for manure produced by this machine; and if this be so, and the apparatus prove in practice as useful as it is said to be, there can be no doubt that it will be extensively used under certain conditions.

The number of waterclosets and privies shown in the English department is singularly small; some half-dozen is about the sum total. The best exhibit of this kind in the Exhibition is, I think, undoubtedly to be found in the Swedish section, and is exhibited by Marino & Co., of 31, Kiarabergsgata, Stockholm. In construction it is simplicity itself; and, although I could not ascertain the price, it certainly cannot be great. It consists of a box hardly bigger than the ordinary English night commode. The lid of the box is provided with an india-rubber band, which fits round the rim of the seat, thus rendering the apparatus absolutely air-tight when the lid is closed. Beneath the seat are two vessels, the one for the ordinary solid fæces, the other for the urine; and by a very simple contrivance the urine is infallibly guided in the right direction by an oblique porcelain diaphragm, which is fitted just beneath the seat, and admits of being easily removed for cleaning. The fæces, being kept dry, are hardly in the least degree offensive, and the vessel into which they fall is large enough to hold the weekly accumulation of a small household. The urine vessel is intended to be emptied more often. The principles on which this stool is constructed are applicable to the sick room, but ordinarily its best situation is of course the garden or back yard, where its accumulating treasures are readily accessible to the gardener or the farmer. I remember having a month's experience of this simple contrivance, a few years ago, in Copenhagen, and being very pleased with its simplicity and its efficacy. If it be thought advisable, a box of dry earth and a garden trowel may be placed beside the stool, with a request that every visitor will see his excreta decently interred before leaving.

A garden privy, shown by Gibbons and Green, of Ipswich, is designed to make use of the siftings of cinders as an absorbent and deodoriser. It combines in one article a privy, cinder-sieve, rubbish screen, and toolhouse. No attempt is made to separate the liquids and the solids, but the absorbent power of the cinder ash is trusted to render the resulting manure practically dry.

Musgrave and Co., of Belfast, exhibit a large and very handsome collection of stoves for domestic and public use, together with some plans showing the mode employed by them in heating dwelling-houses. Their stoves look all that can be desired, and some of them are so handsome as to quite console the purchaser for the loss of dancing flames and a "glowing hearth"—those dearly prized treasures of the English.

As I have hinted above, however, the visitor who wishes for instruction in the science of the economical use of heat must go for instruction to a people who have to contend with great degrees of cold, combined with a scarcity of fuel greater than obtains in England. The Russian section is particularly instructive in this matter, and the various plans and appliances exhibited in the Russian department fully bear out the accounts which are invariably given by travellers of the excellent arrangements for warming houses which are common throughout the whole of Russia. I do not intend to attempt to give any details of the various stoves, models, architectural plans, &c., all of which show how carefully the whole question of warming and ventilating is invariably considered by the Russian architects, who, happily, seem ignorant of the practice which is too common in England of leaving these all-important points to be considered as after-thoughts, so that when the house is built the impatient proprietor is generally compelled to call in an expert, who straightway begins to adopt various measures of expediency, and to knock out the bricks so lately placed, to cut away beams to allow for flues, and generally to tinker, and not uncommonly to spoil. It is time this barbarous method of building should be brought to a close, and it is to be hoped that the spread of hygienic knowledge throughout all classes in this country will before long compel our architects to perform their duties far better than hitherto has been the case. The filthiness of London ought surely to come to an end. It is at present the opprobrium of British architecture.

The walls of the German and Russian sections are covered with architectural plans and engineering drawings, and they constitute one of the most interesting and instructive features of the Exhibition. We are shown at a glance the main features of the drainage, sewerage, and water-supply of several of the most important cities in the German Empire. Walking through the Exhibition, one may gain information on the water-supply and drainage of Berlin; in addition, there are the plans of the Charité and Augusta Hospitals. Bremen sends the plans and photographs of its new school and mortuary. Dantzic exhibits a magnificent plan of its sewers and waterworks. Elberfeld sends a project for supplying Elberfeld and Barmen with Rhine water. Heilbronn sends plans for an aqueduct. Heidelberg shows its water-supply and other hygienic improvements that it has in hand. Stuttgart sends plans of waterworks, twenty schools, a cemetery, urinals, and a hospital. Wurtemberg has a similar exhibition. If we turn to the exhibits sent by the country which is most justly celebrated for its civil engineers, the country which gave birth to Sir Hugh Myddelton, the Stevensons, James Watt, and Brunel, and which has Bazalgette to represent it on the Exhibition committee, we find the walls almost bare, and it is probably true that the plans exhibited could be counted on the fingers. Mr. Robson certainly sends his excellent designs for the new schools of the London School Board, and these are of such acknowledged excellence that they do much to sustain the character of Great Britain. There are also some designs for a prison at Portsmouth, sent by Colonel Du Cane, and in the catalogue I see mention of some models of the Holborn Viaduct, but these last I did not notice. This is all that England sends, and we cannot but regret, if the calls of the Philadelphia Exhibition are really absorbing the energies of the country, I did not refuse altogether to take part in the display at Brussels, rather than consent to appear to such bad advantage.

The greatest enemy with whom man has to contend is probably himself, and certainly one of the most important ways of prolonging life is by subduing the evil passions and emotions which are apt to arise in him, and by training his mind to contemplative rather than combative pursuits. It is not surprising, therefore, that the subject of education holds a prominent place in this interesting show—and, indeed, the exhibition of teaching apparatus will be found most engrossing and attractive.

School-desks are shown in great numbers, and the ingenuity with which many of them are constructed is deserving of all praise. The attempt is very general to make the desk serve more than one purpose: thus there are some which

can be transformed quickly from desks into tables, while others provide a sloping desk, a locker, and a work-table in one. In the model Belgian crèche, which is displayed at the upper end of the Swedish section, we observe that the desks are provided with fixed slates let into the woodwork. This is a good plan for very young children, and must prevent breakages and petty injuries to the children themselves. We observed one desk in the Belgian section constructed with the greatest thought for the future figure of the pupil, who, by a series of screws and boards, can be securely fixed with the feet in the first position, with the back absolutely straight, and with every impediment against faulty deportment. This is all very well, but the restraint imposed is, it struck me, of such a kind as would be likely to excite the Society for the Prevention of Cruelty to Animals.

Noteworthy among the educational apparatus are the very beautiful school-pictures exhibited by Germany, which show to very great advantage when compared with those shown by this country. For finish, accuracy, and artistic treatment these pictures are most remarkable, and it is questionable if anything so good in chromo-lithography has ever been produced in England.

There are many objects, such as fire-engines and fire-escapes, life-boats, and similar things to be seen at Brussels, but, as before stated, the description of them must be left to other journals.

THE ACCIDENT ON BOARD THE "THUNDERER."

WE learn from Haslar that one of the sufferers died on Saturday morning, the 5th inst. The scald was very extensive in this case, and the tendons on the backs of the hands were laid bare. He was one of those reported "very dangerous" from the first, and made a great struggle for life. One of those remaining has his eyes much injured, and another shows slight signs of congestion of the kidneys. This, the suppurate period and the period of exhaustion, cannot fail to be a very trying period in one or two cases; nevertheless, they are progressing so favourably (all things considered) that it is not thought necessary to retain the words "very dangerous" or "dangerous" in the list which is hung up at the front gate for the information of the friends of the sufferers, and so all are now reported as "doing well." The surgeons who were appointed for special attendance on these cases have been withdrawn, and that duty will be performed in future by Messrs. Wood and Laslett, surgeons of the permanent staff of the hospital, who, it is but fair to observe, have been unremitting in their attendance from the first.

There have been three cases discharged cured since our last issue, and there are now remaining in hospital one officer and fifteen men.

PARLIAMENTARY INTELLIGENCE.

HOUSE OF COMMONS.

MILITIA SURGEONS.

Dr. PLAYFAIR asked whether it was proposed to compensate those militia surgeons who, under the new Warrant, will be deprived of a considerable portion of their present incomes by transferring to the medical officers of the brigade depôts the duties for which militia surgeons have hitherto received pay.

Mr. HARDY.—The new Warrant gives medical officers of militia an increase of rank and increase of pay, subject to certain conditions. On the other hand, it takes from them, in cases where brigade depôts are formed, the duty of inspecting the recruits, who are inspected by army surgeons without charge. This is advisable on public grounds, irrespective of money. It has been frequently a subject of complaint that these militia medical officers lost by having to neglect their private practice in order to inspect the recruits. This appears, speaking generally, to be the only part of the Warrant by which they lose. The attendance upon the permanent staff has generally been complained of as a source of loss. From this they will now be relieved when brigade depôts are formed, but they will continue to be employed on this duty when no army medical officer is available. Until the 31st of December next it will not be known how many militia medical officers will accept the new terms, and until then I cannot undertake to enter upon a full consideration of the facts, nor can I give any pledge as to my action.

LEPROSY IN INDIA.

Lord G. HAMILTON, in reply to a question, said it was not the intention of the Government to give effect to the suggestions of Dr. Vandyke Carter, embodied in his report relative to leprosy and leper asylums in Norway, with reference to India. Further inquiry will be made in India with a view to ascertain the correctness of the conclusions at which Dr. Carter had arrived.

ALLEGED DEATH FROM VACCINATION.

Mr. SCLATER-BOOTH, in reply to Mr. P. Taylor, stated he had received a statement from a man and his wife in Andover to the effect that their infant child had died from the direct effects of vaccination, but, on investigation, it appeared that death resulted from bronchitis.

CRUELTY TO ANIMALS BILL.

Mr. CROSS, in moving the second reading of this Bill, traced the history of the question from the rise of the strong feeling against the practice which led to the appointment of the Royal Commission to the Bill which had been based on the report. The result of the report had been to show a general tendency to humanity among those who practised vivisection, but there had certainly been cases of cruelty. The great principle of the Bill was that no person should be permitted to perform experiments, except under restrictions, and that no unnecessary pain should be inflicted on animals. Experiments must only be performed with a view to acquiring new knowledge, for the alleviation of human suffering, in a registered place, and by persons holding a licence. The animals during all the time of the experiments must be kept under the influence of anæsthetics, and the experiments shall not be performed in medical schools or hospitals, nor for the mere attainment of manual skill. Touching on the changes in the Bill, which, he said, did not infringe its principle, Mr. Cross explained that special licences will be granted to the highest class of experimentalists which will not require registration; that special licences will be granted for experiments without anæsthetics, and also for experiments on dogs and cats; and that prosecutions in these cases must be conducted by the Secretary of State, and not by a common informer. Invertebrate and cold-blooded animals will be exempted from the Bill.

Dr. WARD, who had given notice of his intention to move the rejection of the Bill, said that, after the changes made in it, he should not push his opposition so far, but characterised the agitation and the Bill based on it as groundless and absurd.

Sir J. LUBBOCK supported the Bill, and expatiated on the scientific value of the results of vivisection.

Mr. HOLT, on the other hand, would be content with nothing less than the abolition of vivisection; and read various passages from the evidence to show that the report was biased.

Mr. LOWE pointed out that the Bill created a new law, for the present law only protected domestic animals from torture, and denounced with much indignation the proposal to put under the ban of exceptional legislation, and to rank with body-snatchers, men of the highest training, who had performed the greatest services to mankind. He recommended that Parliament should deal with the whole law of cruelty to animals, and that physiological experiments should be excepted, so long as they were not wanton, and were not cruelly conducted.

Mr. P. WYNDHAM supported the Bill; and

Dr. PLAYFAIR also assented to the second reading of the Bill, as amended, because the physiologists recognised the moral obligation to conduct their experiments humanely and with a definite purpose, and did not object to the obligation being made statutory. Still, the Bill only touched a very small corner of the cruelty.

Mr. FORSTER, as one of the Royal Commissioners, defended their conclusions, and said, for himself, that he had come out of the Commission convinced that there was not much cruelty practised, and that there could be no progress in the healing art without vivisection.

The Bill was then read a second time.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 3rd inst.:—

Bevan, Richard, L.S.A., Redruth, Cornwall.
Boodle, George A., L.S.A., St. John's-wood.
Bullen, Beresford R., Upper Kennington-lane
Cuming, Charles H., Devonport.
Dowding, Alexander W. W., L.S.A., Ampthill.
Eve, Frederick S., Romford, Essex.
Fabien, Lewis, Trinidad, West Indies.
Gathergood, Benjamin W., L.S.A., Lynn Regis.
Glyn, Herbert A., M.B., Gloucester-street.
Hatch, William K., M.B., Shrewsbury.
Hume, Frederick N., Meonstoke, Hants.
Mahony, Lawrence F., L.S.A., Dalston.
Paul, Reginald, L.S.A., Langport, Somerset.
Rowbotham, Arthur J., Woolwich, Kent.
Sandwith, Fleming M., Wimbledon.
Stevenson, Leader H., Bexley, Kent.

Of the 197 candidates examined during the last and present month, 118 passed to the satisfaction of the Court of Examiners, and received their diplomas; 28 passed in Surgery, and when qualified in Medicine will be admitted Members of the College; the remainder, having failed, were referred to their professional studies for six months; 4 candidates who passed in Surgery at previous examinations, having subsequently obtained Medical qualifications, were also admitted Members. This is the last examination until November.

[In the list which we published last week of gentlemen admitted Members of the College, the fifteenth name from the bottom of the column, p. 206, should read "Packer, Wm. Herbert, L.S.A., Cheltenham," not "Parker."]

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At examinations held on July 25th and following days, the undernamed were admitted Licentiates of the College:—

James Ahern, Joseph Atkinson, John Patrick Barber, John Wm. Beatty, William Joseph Carroll, John Patrick Clarke, William Mayne Clayton, John David Collier, John Coary, James Davidson, John Delahoyde, John Dunbar Dickson, Anthony Doyle, Patrick Dunn, Laurence Finegan, John Flanagan, William John Fraser, John A. Frend, William Hartigan, Henry Stewart Jackson, Hugh Kennedy, William Peter Kirwan, George Reginald Leeper, Michael Macnamara, James M'Mun, Edmund Murphy, Timothy O'Connell, Eugene O'Donovan, Goodwin O'Grady, John Albert O'Meara, John S. Reed, Thomas Russell, John Ryan, George Stoker Charles Joseph Trimble, Edward Thomas White, Wm. M'Dowel Wright.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Aug. 3rd:—

Davis, Frederick Howard, Dawley, Salop.
Denby, Timothy Curtis, Infirmary, Bradford.
Lake, William Wellington, Ilford, Essex.
Lithgow, Thomas George, Kensington-park-road.

The following gentlemen passed the Primary Professional Examination on the same day:—

Frederick A. Harris and David S. Davies, St. Thomas's Hospital; Arthur J. Newman and Richard Carter Revell, Middlesex Hospital; Henry Edward Giffard, Herbert Langton, and Wm. Milner Burgess, St. Bartholomew's Hospital; Alfred Swann and William Leah, Queen's Hospital, Birmingham; Joseph Carey, London Hospital.

[In the list of gentlemen who passed the Hall on the 20th of July, the address of Mr. R. A. Jackson was stated as Norfolk-square, whereas it should have been "Nottinghill-square."]

INDIAN MEDICAL SERVICE.—The following is a list of candidates who were successful at both the London and Netley examinations recently held, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
*Tomes, A.	5416	Henderson, W. G. H.	4436
Meredith, E. B. ...	5230	Doyle, B.	4412
Mawson, W. A. ...	4902	Cobb, R.	4266
Maitland, J.	4856	Stephens, A. A. R. ...	4259
MacGregor, J. ...	4837	Cadge, W. H.	4220
Peevor, G. H.	4818	Hunter, J.	4085
Dantra, S. H.	4746	Swaine, C. L.	4067
Macdonald, D. J. ...	4650	Smith, M. H.	3906
Stewart, A. K. ...	4625	Dalal, K. A.	3920
Walter, G. L.	4502	Boyd, H. W. B. ...	3886
Hamilton, H.	4462	Farrell, P. J.	3662
Halpin, J. N.	4440		

* Gained the Herbert Prize.

NAVAL MEDICAL SERVICE.—The following candidates were successful at both the London and Netley examinations recently held, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
Thomas, R. H. ...	5170	Sibbald, T. M. ...	3120
Cree, W. E.	4105	Thompson, Wm. ...	3042
Crocker, H. L. ...	4005	Yeo, H. F.	2775
Popham, T. D. ...	3945	Armstrong, J. B. ...	2548
Colthurst, L. T. ...	3703	Smith, Geo.	2536
Kellard, J. T. W. S.	3150	Cuffe, G. M.	2353

THE Brighton Board of Guardians have rejected, by 21 votes to 11, a proposal to prohibit the use of alcoholic drinks by the inmates at the workhouse except when ordered by the medical officers.

MEMORIAL BUST OF STROMEYER.—The bust in marble of the late Dr. Stromeyer, of Hanover, subscribed for by most of the leading physicians and surgeons in the metropolis, has just been offered by the Executive Committee on behalf of the subscribers, and accepted by the Council of the Royal College of Surgeons of England. The bust is by W. Engelhard, of Hanover, and is considered an excellent likeness of the distinguished surgeon.

A PORK-BUTCHER and sausage-maker, living at Brentford, was charged last week on a warrant with having on his premises, for the purpose of manufacture into human food, upwards of a quarter of a ton of putrid flesh. The evidence of the sanitary inspector placed the guilt of the defendant beyond all doubt; in fact, it is the worst case which we have yet seen reported. The inspector nearly fainted from the smell which pervaded the place. The chairman of magistrates said the offence was one of a most execrable character, and he was doubtful whether each lot of meat seized should not be treated as a separate offence, and so make the punishment cumulative. The sentence of three months' hard labour imposed on the defendant will, we hope, be a sufficient warning to deter other pork-butchers from attempting to poison the public.

Medical Appointments.

BINDLEY, P., M.B., has been appointed Resident Medical Officer to the General Hospital, Birmingham, vice Carter, resigned.

BLAKE, Dr. W., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Kilkelly Dispensary District of the Swinford Union, co. Mayo.

CAMERON, Dr. R., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

CHAMPNEYS, Dr. F. H., has been appointed a Physician to the Out-door Department of the Samaritan Free Hospital for Women and Children, vice Godson, resigned.

CONNON, W., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

FRAZER, Dr. W., has been appointed Resident Medical Officer to the Royal National Hospital for Consumption, Ventnor, vice Williamson, appointed to the St. Marylebone General Dispensary.

HATFIELD, W. H., L.F.P.S.G. & L.M., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

HOPE, W., M.D., has been appointed a Physician to the Belgrave Hospital for Children, Cumberland-street, vice Fenwick, resigned.

HOUGHTON, W. B., M.B., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Registrar to the Charing-cross Hospital, vice Duncan, resigned.

JOHNSON, H. S., L.K.Q.C.P.I. & L.M., has been appointed Medical Officer for the Buckfastleigh and South Brent Districts of the Totnes Union, vice Kiernan, resigned.

MACDONNELL, M. A., M.D., has been appointed Resident Assistant House-Surgeon to the North Dispensary, Liverpool, vice Clibborn, resigned.

MCFADYEAN, Mr. J., has been appointed Professor of Anatomy at the Royal Veterinary College, Edinburgh, vice Branford, resigned.

MARSHALL, J., F.R.C.S.E., has been appointed a Consulting Surgeon to the Hospital for Consumption and Diseases of the Chest, Brompton.

NEWBY, C. H., L.R.C.P., M.R.C.S., has been appointed Surgical Registrar to St. Thomas's Hospital, vice H. H. Clutton, B.A., M.R.C.S., appointed Resident Assistant-Surgeon.

PATERSON, T., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Worcester Amalgamated Friendly Societies Medical Association, vice Magill.

PRESTON, W., M.B., C.M., has been appointed Honorary Surgeon to the Lancaster Infirmary and Dispensary.

RHODES, G. S., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

SHANAHAN, J. F., L.K.Q.C.P.I., L.R.C.S.I., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

THORNTON, P., M.D., M.R.C.S.E., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

THORNTON, W. H., M.D., F.R.C.S.E., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

WATSON, W. M., M.D., has been appointed Medical Officer of Health for the Hoylandswaine Urban Sanitary District, vice Leigh, deceased.

WATTS, W. F., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Dewsbury Hospital and Dispensary.

WILSON, Dr. (late Demonstrator of Anatomy under Prof. Humphry, at Cambridge), has been appointed to the office of Demonstrator and Superintendent of Practical Anatomy at the Medical College of the London Hospital.

Births, Marriages, and Deaths.

BIRTHS.

ARROWSMITH.—On the 1st inst., at Darlington, the wife of William Hixon Arrowsmith, F.R.C.S.Ed., of a daughter.

CHILCOT.—On the 30th ult., at Bridge House, Dartford, the wife of James Chilcot, M.R.C.S.E., of a son.

DOUGLAS.—On the 4th inst., at Newbury, the wife of William Thomas Parker Douglas, M.B., of a daughter.

FILSON.—On the 5th inst., at Portaferry, co. Down, the wife of Alexander Filson, M.D., of a son.

GRAVES.—On the 7th ult., at Naini Tal, North-West Provinces, India, the wife of William Graves, L.R.C.S.I., Surgeon-Major, Army, of a son.

HIBBERD.—On the 1st inst., at Campfield Lodge, Walterton-road, St. Peter's-park, the wife of Edward Hibberd, M.D., of a daughter.

HICKS.—On the 5th inst., at Amhurst-road, Hackney, the wife of George Borlase Hicks, L.R.C.P.Ed., of a son.

ORMSBY.—On the 14th ult., at Stourport, the wife of John Ormsby, L.R.C.P.Ed., of a daughter.

RAYNER.—On the 1st inst., at Tiviot Dale, Stockport, the wife of Edwin Rayner, M.D., of a daughter.

SMITH.—On the 5th inst., at Kenwith, Devonshire, the wife of Heywood Smith, M.D., of a daughter.

MARRIAGES.

MOSSE—MACDONALD.—On the 3rd inst., at St. Michael's, Athy, Charles Benjamin Mosse, C.B., Surgeon-Major, Army, to Margaret Celestina, daughter of the Rev. Canon MacDonald.

RICHMOND—DAWSON.—On the 3rd inst., at Christ Church, Crouch End, Onslow Robert Richmond, L.R.C.P.L., to Mary Fanny, daughter of Enoss Dawson, Esq.

WILLIAMS—WEBBER.—On the 1st inst., at St. John's Church, Hove, by the Rev. J. J. Tapson, Vicar, uncle of the bride, assisted by the Rev. F. W. Nickoll, Chaplain of H.M.S. *Implacable*, Alfred Henry Williams, M.B., M.R.C.S., Surgeon, Indian Medical Department, to Mary Louisa Emily, daughter of the late G. F. Webber, Esq., of Tamar-terrace, Stoke.

DEATHS.

HARDING.—On the 31st ult., at Bathwick, Somersetshire, William Harding, Surgeon, aged 70.

KIRK.—On the 3rd inst., at Westfield, Malton, William Kirk, Jun., M.R.C.S.E., of Hedon, Hull, aged 41.

LAING.—On the 22nd ult., at Ferryport-on-Craig, Fifeshire, George Laing, L.R.C.S.Ed., aged 66.

MORRIS.—On the 19th ult., at Kilicnaule, co. Tipperary, Michael O'Kennedy Morris, M.D., aged 48.

PEAKE.—On the 6th inst., at Colchester, George William Peake, M.D., Staff Surgeon-Major, Army, aged 51.

RAINY.—On the 6th inst., at Woodside-place, Glasgow, Harry Rainy, M.D., aged 83.

SMITH.—On the 21st ult., at Ferbane, King's County, Henry Joshua Smith, L.R.C.S.Ed., aged 47.

TINDAL.—On the 31st ult., at Abbotsford-place, Glasgow, David Tindal, L.F.P.S.G.

TOMLINSON.—On the 3rd inst., at Preston, Watson Tomlinson, L.R.C.P.Ed., aged 29.

WYLIE.—On the 20th May, at Hamilton, Victoria, Australia, James Roxburgh Wylie, M.D.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

A SCENE IN THE MELBOURNE UNIVERSITY.

THE undergraduates in the Faculty of Medicine at Melbourne would seem to be emulating their *confrères* in Paris. At the annual commencement of the antipodal University the *alumni* of the medical school behaved (as we are told by a correspondent of the *South Australian Register*) so riotously that the proceedings had to be brought to an abrupt termination. An unlucky undergraduate who had the temerity to send an account of the origin and course of the disturbance to the newspapers was compelled, on discovery, to pen an apology, and was afterwards ducked in the University pond. Of the cause of the *émeute* we are not informed; but we can conceive of the existence of no grievance which could warrant the resort to such unmannerly violence by gentlemen who are engaged in preparing for a profession the members of which should be representative of all that is dignified and refined in modern civilisation.

DR. RUSSELL AND DR. WEST'S PROCESS OF ESTIMATING UREA.

To the Editor of THE LANCET.

SIR,—In the course of some experiments we have been making this summer, we found that the hypobromous solution decomposes in hot weather more quickly than we expected, and that it is very important that it be quite freshly prepared. We wish to draw especial attention to this, and to suggest that the solution be prepared in the following manner:—A solution of caustic soda is made in water in the proportion of 100 grammes of solid caustic soda to 250 cc. of water. This solution may be made in large quantities, for it will keep good for a very long time. To part of this solution bromine is added in the proportion of 25 cc. to every 250 cc. of caustic soda solution *at the time it is required for use*.—Yours &c.,

Chemical Laboratory, St. Bartholomew's Hospital, August, 1876.

W. J. RUSSELL.
SAMUEL WEST.

ASSISTANCE TO THE WOUNDED IN WAR.

A PAPER which Surgeon Sandford Moore, M.B., lately read before a meeting comprising many surgeons and military men has been opportunely published. The medical service of the armies of Europe when in the field is conducted upon one or other of two general principles. One, the more modern, is the principle of separating the wounded from the moving force, then isolating and distributing them. For this a system of field hospitals is requisite. The other plan is the conveyance of the wounded in company with the active force. For this a large ambulance transport is requisite. The former is the one on which the Prussian medical service is conducted, while the British medical service is conducted on the latter system. Like most English surgeons who served during the Franco-German war, Mr. Moore is favourably disposed to the Prussian system, the arrangements of which are briefly as follows:—A battalion takes the field with a medicine cart and a few stretchers, and a proportion of surgeons and auxiliary bearers—two of the former and four men per company of the latter. The battalion carries with it no regimental hospital equipment, nor any material for opening a detachment hospital. In minor actions, first assistance to the wounded is given by the battalion surgeons and auxiliary bearers. Both advance with the soldiers under fire, and tender what aid they can to those who fall. The medicine carts and stretchers are advanced as far as possible, and "bandaging places" formed just beyond rifle range. The auxiliary bearers then carry back the severely wounded, who are unable to walk, on their stretchers to the bandaging places. Injuries are then examined, dressings applied, and the necessary surgical operations performed, after which the patients are removed to a sheltered quarter. If the engagement becomes general, the sanitary detachments and field hospitals, which follow the advancing army as closely as possible, are then thrown forward, the former to relieve the auxiliary bearers, and the latter to provide temporary ward accommodation. There are three sanitary detachments to each army corps, and to each detachment there are attached, besides other officials, seven surgeons and 134 sick-bearers. Those engaged in sending medical succour to the wounded on the Servian battlefields may peruse Mr. Moore's pamphlet with advantage.

Alopecia.—We do not prescribe. Consult a medical practitioner.

EPILEPTIC CONVULSIONS AFTER LABOUR, WITH ALBUMINURIA; RECOVERY.

To the Editor of THE LANCET.

SIR,—MRS. C——, aged twenty-three, of a stout, plethoric nature, was confined of her first child on Saturday, June 24th, 1876, at 10 A.M. Labour quite natural. I left her at 11 A.M., going on well. I was sent for at 4 P.M. On my arrival, at 5 P.M., she was in violent epileptic convulsions. I at once bled her to fifteen or twenty ounces, shaved her head, applied ice to her head, and blistered nape of neck. Ordered a draught containing bromide of potassium, one drachm; chlorate of mercury, fifteen grains; water to one ounce: to be taken immediately, and repeated every hour until four had been taken. I gave her five grains of calomel and one minim of croton oil on back of tongue; also a castor oil and turpentine enema, and turpentine stupes to feet. Examined urine, and found it highly albuminous, and containing casts. The fits continued during the night and up to 4 P.M. on Sunday. I gave her at 1 P.M on Sunday a subcutaneous injection of chloral hydrate, and repeated it every hour for three hours in succession, after which the fits left her, but she was quite insensible.—Sunday night: Quite unconscious; breathing stertorous; tongue severely bitten, highly congested, and protruded.

Monday morning.—Still unconscious. Continued application of ice to head, dry cupping, and linseed poultices to loins.—Night: Still unconscious. Belladonna plasters to breasts. Ordered her Brand's essence of beef, with milk and iced soda-water.

Tuesday morning.—Still insensible; had no more convulsions.—Night: Gradually regaining consciousness, but cannot articulate properly. Ordered a draught containing bromide of potassium, ten grains; potassio-tartrate of antimony, one-twelfth of a grain; water to one ounce: to be taken every four hours.

Wednesday morning.—Speaks in monosyllables; says she has been in a dream. To continue beef-tea, iced soda-water, and ice to suck.—6 P.M.: Conscious; seems to recognise her mother and nurse; passed a bad night; great pain in abdomen.

Thursday morning.—Examined abdomen, and found it tympanitic. Temperature 101°; pulse 108. Ordered calomel with opium every four hours, linseed poultices to abdomen, and liquor of acetate of ammonia with camphor-water every four hours.—Night: Great improvement; much less pain; discharge still continuing; passed a good night.

Friday morning.—Quite conscious; no pain. Temperature 99°; pulse 95. Recognises her mother and nurse, but does not remember being confined.—Night: Going on well; urine highly albuminous; has had no nausea or vomiting since she was confined.

Saturday.—Temperature and pulse nearly normal; no pain; knows her husband and mother, and can talk fairly.

Sunday.—Getting on well; urine albuminous, but not so much as at first; no casts visible.

Remarks.—I feel convinced that the hypodermic injection of chloral hydrate was the principal means of stopping the violent epileptic convulsions in the above case.

Yours &c.,
A. E. BOWER, M.R.C.S. Eng.,
Late Surgeon, Royal West Indian Mail Service.

Prees, Salop, July, 1876.

A WISE LEGACY.

M. VULPIANC GERDY, who was for a long time Inspector of Uriage, has left a sum of money to the Academy of Medicine of Paris to found a kind of school in which young medical men, with suitable salaries, shall for four consecutive years repair to such watering places as shall be pointed out to them; study and collect cases, and report upon them to the Academy. Satisfactory reports will be specially rewarded.

DALTONISM.

DYSCHROMATOPSY is an affection which, among seafaring men, may lead to sad calamities. It may occasion errors as to the nationality of pavilions, or the transmission of despatches; errors again as to the position of vessels met with at night, which should have green and red lights, one fore and the other aft; mistakes as to the colour of the revolving or other permanent lights. As hitherto the faculty of distinguishing colours has not been tested (at least in the French navy), it may be surmised that many collisions have been caused by mistaking the colour of the lights. Dr. Romberg has collected the accounts of 2408 collisions at sea. Neglect and unskilfulness of crews, and such accidents as could not be foreseen or avoided, were the causes in 1502 cases. The remaining 846 are divided as follows:—Error of the pilot and the captain, 215; carelessness as to the rule of the road, 537; unascertained causes, 94. Of late, however, the candidates at the naval school have been subjected to various tests to try their capability of distinguishing colours.

Mr. M. F. Anderson.—We shall be glad to receive it and give it consideration. The paper must, however, be of moderate length.

QUACK MEDICINES.

To the Editor of THE LANCET.

SIR,—From the many questions put to me by medical men and others in reference to the French mode of dealing with "quack medicines," I am led to believe that want of knowledge on the subject exists. I hope you will, therefore, allow me, through THE LANCET, to give an extract from a letter on the subject from a well-informed and reliable French source. The exact law on the point in question I hope to obtain in full in a short time. The extract says:—

"No remedy whatever can be sold or even used without first being examined and authorised by a Special Committee of the Faculty of Medicine."

If our Government does not at present see its way to the total suppression of the traffic in quack medicines, it could not do better than follow this French mode of procedure. A "Faculty" it already has at hand in the medical portion of the Board of Health, which could be easily so constructed as to perform the functions now discharged by the French Faculty of Medicine. Even when a medicine has passed the medical examination, it should under no circumstances be allowed to circulate without having attached to the bottle and outside wrapper its composition in plain English; the diseases and the exact stages of the diseases for which it is curative, its varying doses, and the idiosyncrasies in which it should never be given. A medical man, before he is allowed to prescribe for patients, is bound to know and keep these things in view, and it is unpardonable in any Government to allow quacks, who are ignorant of the first principles of disease, and consequently of prescribing, to dose and may be to poison the credulous and the ignorant by their nostrums, simply because these compounds have attached to them the Government stamp, which has been of late most appropriately called "A licence to kill." The good health of a nation, like the good health of an individual, is the greatest of all blessings, and no greater or nobler work could occupy the President of the Council than purging the country of quacks and quack medicines. I am sure the profession and the country at large owe Colonel Leigh a debt of gratitude for his having brought the subject before Parliament by the question which he put to Viscount Sandon, and it is to be hoped the University members, whose especial functions would seem to be to diffuse intelligence, will render all the assistance they can in eradicating a sham which would not be tolerated by the Continental nations.

I am, Sir, your obedient servant,

July, 1876. M.D.

SUICIDE IN THE GERMAN ARMY.

AN official report on the sanitary condition of the German army states that suicide is on the decrease. In 1868-69 it reached 0·67 per 1000 of the effective forces; in the last three years, on the other hand, it was no more than 0·53. The number of suicides, it would appear, is relatively highest in the Austrian army, where from 1863 to 1871 it averaged 0·25 per 1000, and lowest in the English army—0·39 per 1000. Belgium and France maintain the mean proportions of 0·45 and 0·49 per 1000 respectively.

COTTAGE HOSPITALS.

Judex wishes for information as to the best and most economical means of establishing a cottage hospital (about six beds).

Sister Mary.—A band of nurses have already started for the seat of war. We do not think any more nurses from England will be required, as Russian ladies are daily arriving on the scene.

Mr. J. W. Smith.—Williams's book (Veterinary), lately reviewed in our columns.

TREATMENT OF ULCERATED LEGS.

To the Editor of THE LANCET.

SIR,—Some time since one of your correspondents wrote a letter on the successful treatment of ulcerated legs by some simple remedy which I have quite forgotten. If any of your numerous readers can supply me with the necessary information I shall feel obliged, as I have several cases under my care just now.

I am, Sir, your obedient servant,

Aug. 9th, 1876. NEMO.

EXPERIMENTAL ASPHYXIA.

M. COLIN, Professor at the Val de Grâce of Paris, brought before the Academy of Medicine the results of numerous experiments on bulls, horses, rams, dogs, rabbits, birds, rats, and mice, to ascertain the exact period when death takes place in cases of submersion or impediment of breathing. Whether the multiplicity of experiments had recourse to was justified is open to question. The gross result obtained by M. Colin is that we must not rely much on artificial respiration. He wanted to show the weak side of M. Woiller's spirophore. It was proved, however, that insufflation from mouth to mouth may have excellent results.

INFANTILE DIARRHŒA.

To the Editor of THE LANCET.

SIR,—Although it would ill become an obscure worker in the hive of medicine to express impatience ordinarily at the indifference with which his teachings are received, yet there is a limit, and such I confess I feel has been reached on reading a leading article in your last number on Infantile Diarrhœa. Every line of your notice is so important that I beg leave to reproduce some of them as a preliminary to my own remarks, any rudeness or roughness of which I trust will be pardoned for the sake of their sincerity and the gravity of the subject.

You say that there is no subject of more interest in the present summer months than infantile diarrhœa; that the diarrhœa of children is a deadly disease, and seriously raises the mortality in a few weeks; that it is not confined to the poor and uneducated, but attacks extensively the children of the rich, and, "despite any suggestion of sense and medical science, proves fatal." That it is a sort of sanitary scandal, and, prevailing to a considerable extent in the months of July and August, slays its hundreds (*thousands* would have been the proper word). That "the question is of more than professional importance; it is one of scientific and public interest." You then add that "we are gradually arriving at something like definite notions of the nature and causes of this serious disease"; that we take it as proven, especially by Continental and American pathologists, among whom Dr. Lewis Smith deserves a conspicuous place, that, pathologically, these cases consist of a condition of entero-colitis—that they constitute a sort of infantile typhoid. Dr. Sloane, of Leicester, is then named as having come to a definite conclusion—namely, "that infantile diarrhœa is caused by children being fed with milk from cows which drink water contaminated by sewage."

Sir, you have most truly described this state of our medical knowledge as "a sanitary scandal"; but it is more and worse, since it shows a learned profession incapable of emancipating itself from theories universally acknowledged by themselves to be inadequate, or of drawing a simple conclusion from premises as obvious as were ever presented to observation. Here we have a malady which reigns at one certain season, which every writer—at least within the last two or three years, and since the Registrar-General's Reports directed attention to the fact—connects with "high temperature," "heat," &c., and yet none of the leaders of thought have deduced from this the natural consequence, that if *heat* be the cause of infantile diarrhœa, *cold* must be the cure. We prefer frittering away our powers in studying the hypotheses of foreign and home investigators, at whose *dictamina* one scarcely knows whether, in vulgar parlance, to laugh or cry.

We are treating of acute æstival infantile diarrhœa, and with the utmost respect for Dr. L. Smith, I deny that he or anyone else can make one important addition to our knowledge of the pathological anatomy of the bowel, or any fact that has not been known since, at least, the Broussaino period of ventral pathological investigation. But what does his theory of entero-colitis—i. e., inflammation of the muscular coat of the bowel—lead to? Unless Dr. Smith have invented some new theory of treatment to accompany the new one of cause, we must fall back upon leeching, blistering, hot stimulant fomentations, hot bathing, and to end with that result which leads public critics to call it a scandal, and to justify the journalist who designates the practisers of it as "the most unenterprising of mankind."

As for the infected-milk-drinking theory, it is but a mere conjecture, founded on Dr. Murchison's theory in relation to typhoid; and had Dr. Sloane known the climatic and geographical history of infantile diarrhœa, and that whole regions of the world exist, eminently the Empire of China for example, where this disease is most fatal, yet where the use of milk is unknown, he would not have made it public.

In 1858, at Melbourne, Australia, there was inserted in the Transactions of the Royal Medical Society a paper on this subject, by which principally, and by other complaints, 80 per cent. of the new-born perished within the year. It was then shown conclusively that the same law which governs diarrhœa in this country reigned in fuller force there, and that, in fact, for three-fourths of the year mortality almost ceased among infants. Diarrhœa was then proved to be a simple congestion of the bowel, unaccompanied by inflammation of any sort or degree, and abundant proofs and examples were adduced of infants "given over" as hopeless under the ordinary treatment, speedily recovering by the use of cold in every form of administration. The mortality, from the abundant supply of water to the city, then first given, and by this mode of treatment, fell the following year to 56.

At this season, as you are aware, I have for some years past begged the attention of your readers to this method of cure, always accompanied by cases, and the following was in MS. when your journal reached me.

The girl, aged eight months, of Mrs. S., Park-road-villas, Battersea-park-road, S.W., was attacked early in September, 1875, by diarrhœa. The medical gentleman who had attended her at midnight on the 9th feared that she would die before morning, and retired, and I saw her in the afternoon (and I beg to say I have published no cases where ordinary treatment has not been found previously unavailing). She lay on her back, motionless; her intellect clear; her stomach rejecting everything; her bowels shooting out with great force eight watery motions in the five previous hours. She was bathed in the coldest water procurable till ice was got, had iced drinks with stimulant, iced injections, &c., and after the first bath slept soundly for ten hours, her first for several days, and, in short, within a week was quite out of danger. She took no medicine whatever, and while the purging less quickly ceased, the vomiting stopped immediately.

In an essay which I hope will appear in a few weeks, on the Origin of Epidemics, I have treated this subject more at large; but I may here say that the immediate cause of infantile diarrhœa was shown to be, as above stated, a simple congestion of the mucous membrane of the bowel; that this is intimately connected with the state of the skin, by the restoration of which to its firm, elastic, and natural state, including the return of the excess of blood driven in on the mucous membrane to the surface, the congestion is relieved and the cure effected; that this is procured without medicine of any kind. And I further say that when a knowledge of this treatment falls into the hands of parents, its proper recipients, learned treatises, like those above noticed, and others, such as, for example, disfigure the most celebrated compilation of the day, Von Zeimssen's Encyclopædia, will have ceased to be possible.

I am, Sir, your obedient servant,

Great Marlborough-street, Aug. 8th, 1876. J. W. MACKENNA, M.D.

BEST COPY AVAILABLE

NEW WORK ON TOPOGRAPHICAL ANATOMY.

WE understand that Professor Braine's valuable work on this subject, the plates of which comprise sections of the entire body, taken in two planes, is now being translated and edited by a London surgeon, and will be ready early in the autumn. There is a great want of some book of this kind, which must be of considerable value to operating surgeons, physicians, and students who propose taking the diploma of Fellow. In order that the work may be bought within the reach of all, the original plates have been photographed and reduced to half size. Owing to the great dearth of subjects, and apparently the means of preparation, an English surgeon has not hitherto been found to undertake such a task. The text is no mere description of the plates and woodcuts, but is an epitome of the *raisonnée* of all surgical operations and medical diagnoses.

Lignum.—Five guineas would not be an immoderate charge; but our correspondent is a better judge than we can be in this case.

COMPLICATED MIDWIFERY CASE.

To the Editor of THE LANCET.

SIR,—The following case may be interesting to some of your readers.

I was called to see Mrs. C——, aged forty-nine, in labour with her seventeenth child (of whom only two were living), at 9 A.M. on July 19th, 1876. On my arrival at her house, some three miles distant, I was told by the nurse that "the after-birth was born, and that the child's head had suddenly gone back." I found a pained, anxious expression of countenance, a scarcely perceptible pulse, cold extremities, and the body covered with a cold, clammy perspiration; the uterine contractions had ceased, but there was a burning pain all over the abdomen, which was so tender that the patient could not bear it to be touched. The placenta was lying on the bed amid a considerable quantity of blood and clots. On vaginal examination, I found a hand presenting, but the head could not be reached without passing my hand into the uterus. The promontory of the sacrum was projecting far into the passage, which accounted for a history of difficult labours, in some of which craniotomy had, I believe, been performed. Considering that there was a rupture of the uterus, I told her husband that I had very little hope of her recovery, and at once proceeded to turn, having seen to the bladder and administered a stimulant. This was effected without difficulty; but I was obliged to perforate behind the ear before the head could be extracted. There was no external hæmorrhage; but the collapse proceeded to such a degree that I every moment expected a fatal issue. I again introduced my hand into the uterus, and, after removing a great quantity of clots, I found a coil of intestine about the size of a man's fist. This I endeavoured gently to reduce; but not succeeding readily, I thought it best to desist, being fearful of hæmorrhage into the peritoneal sac. I remained in the house upwards of three hours, and administered opium and stimulants until the patient had somewhat rallied, when I left. I returned in two hours, but found her still very low. Opium to be continued, but the stimulants reduced.

July 20th.—11 A.M.: Passed a good night; great tenderness over abdomen, but not much pain. Pulse 140; temperature 100°. Sent for again at 4 P.M.: Violent pain in abdomen, with a considerable amount of swelling; had passed urine freely; vomiting, which was constant throughout, still continued. Ordered a mixture, containing Battley's solution, and a calomel and Dover's powder, every four hours. Saw her again at 9.30 P.M.: Pain much easier and abdomen less tender, but very hard to the touch. Hot flannels sprinkled with tincture of opium had been applied all the day. Linseed poultices ordered every hour, and six grains of compound soap pill instead of Dover's powder.

21st.—12 noon: Saw the patient in consultation with another medical man. Pain much easier, and tenderness over abdomen less. Pulse 140; temperature 99·5°. Passed urine freely; perfect control over bladder. Opium and poultices to be continued.—4 P.M.: Patient much the same; vomited once or twice. Pulse and temperature the same.

22nd.—Patient worse; vomiting very troublesome; abdomen less tender. Pulse 120; temperature 100°. Ordered ice, champagne, and soda-water; to get enema of olive oil and mucilage, which brought away some hardened fæces.

23rd.—Patient expressed herself as being more comfortable. Pulse 140, very weak; temperature 99·5°. Belly very much enlarged; vomiting less. Takes a fair quantity of milk, jelly, and champagne.

24th.—Patient free from all pain; belly less swollen; tenderness almost gone; bowels moved three times in the night; very little vomiting. Pulse 130; temperature 100°. Opium to be reduced half. To take half a grain of quinine twice a day.

25th.—Patient much the same. Pulse 120, and weak; temperature 99·5°. No vomiting; no tenderness over abdomen; slept badly; abdominal swelling decreased; bowels opened once during the night.

26th.—Severe fainting fits during the night; better this morning; bowels moved. Pulse 130; temperature 100°. Appetite improved; no vomiting. To have eggs beaten up with milk.—11 P.M.: Messenger came to say patient was dying. On arriving I found she had severe vomiting and abdominal pain, but not of the same character as before. On questioning, I discovered she had drunk some inferior port wine, "Hinc illæ lachrymæ." Ordered a dose of opium and a mustard poultice to the stomach.

27th.—Patient going on nicely.

31st.—Patient convalescent.

I remain, Sir, your obedient servant,

August, 1876. E. T. B.

CONSUMPTION HOSPITAL IN ALGERIA.

S. L. T., (Dublin.)—Yes, an establishment for the treatment of the phthisical is about to be opened in Algeria. The physician is Dr. Landowski, and the French Government have such confidence in him and such approbation for the project that they have conceded 100 hectares of land between Cherchell and Tipasa as a site. Salubrity combines with natural beauty to make the establishment an attractive one; while one feature of Dr. Landowski's treatment will be the use of camel's milk, for the supply of which the French Government have granted pasturage and other facilities.

Mr. C. C. Cocks.—Thanks for the extract enclosed by our correspondent. No reliance can be placed on such statements, which are, however, easily made and with difficulty disproved.

ARMY MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Let such surgeons as contemplate entering the service of Her Majesty's army remember that on finishing the four months' course at Netley they are shipped off to India, where no corresponding increase of pay will be made. They will have to serve in this country on the minimum scale of pay, barely enough for a bachelor to live on. The promised increase of pay will only cost the Home Government that sum in exceptional instances, and will not cost the Indian Government anything.

Your obedient servant,

Panjab, India, July, 1876. SURGEON-MAJOR.

*** We are compelled to defer the insertion of some other communications on this subject until next week.—ED. L.

ACTUAL CAUTERY IN DISEASES OF BONES.

M. PHILIPPEAUX has published an article in the *Lyon Médical* of Aug. 6th, 1876, in which he shows that caries of the os calcis may be arrested by perforating the bone with a red hot skewer, endeavouring thus to destroy the carious portion of the bone and setting up healthy action! This proceeding is especially applicable to young people. With the old and feeble the removal of the calcaneum by M. Ollier's method, is preferable.

Inquirer.—Bournemouth, Folkestone, the district between Wimborne and Ringwood, Bagshot Heath, Surrey.

TYPHUS FEVER FROM VOLUNTARY STARVATION.

To the Editor of THE LANCET.

SIR,—The following is a faithful epitome of a case of typhus fever, which I think is of some interest as suggesting a note to the etiology of that disease.

A buxom Highland lass, fair, florid, and nineteen, laundry-maid at the Tongue Hotel, having been twitted by her acquaintances about her growing corpulency, imposed upon herself a course of starvation in order to reduce her figure, partaking of food only very sparingly and at long intervals of time. She also had recourse to tight-lacing as a further aid to accomplish her attenuation. In a short time these vigorous measures began to take effect, and it was a subject of remark among her revilers that she was getting thin. About this time she consulted me for irritant dyspepsia. It was just that variety of it which I have observed to be common among persons who endure great fatigue and long fasts. A little prussic acid in gentian soon restored her. The season advancing, however, her duties became laborious, and nature, besieged on both sides, at last surrendered, about three months from the date of the patient's first practising fasting and tight-lacing, and an ordinary case of typhus ensued. Some particulars, however, in the history of its progress are worthy of note as being intimately related to the causative facts.

Prostration commenced almost immediately, and continued to be the chief cause of anxiety throughout. The system had no doubt been brought very low by nervous and muscular exhaustion, unrepaired by due alimentation. Amongst the complications, a follicular inflammation of the stomach was prominent during the first week or so, and was nothing more, I fancy, than the monitive dyspepsia, for which she previously sought advice, in an aggravated form. There was congestion of the lower lobe of both lungs, which afterwards drifted to pneumonia of the left lung, the upper lobe of which also got affected, and had the worst of it. I am inclined to attribute this last complication to the tight-lacing, particularly as both sides were at first involved. The temperature was carefully and regularly taken, and was typical of typhus; the highest was 105·5°.

The treatment consisted in the main of ice, champagne, opium, purgatives, stimulant and nutritive enemata, and local soothing applications, special pains being taken with the hygienic measures. Patient made a slow recovery.

Truly yours,

Tongue, August 2nd, 1876. J. A. AUSTIN, M.B.

DYSPHASIA.

THIS has been defined as a disease which has for its cause a lingual and labial ataxy, and this ataxy in turn is anatomically explained by an alteration in the bulb at the level of the floor of the fourth ventricle, where lie the ganglions of origin of the cranial nerves, and notably those of the great hypoglossal and facial nerves. The subject has been handled, in its relation to progressive general paralysis, in a careful and lucid manner by M. Clovis Gallopain in the last number of the *Annales Médico-Psychologiques* (Paris, July, 1876).

ON THE VALUE OF GERMAN MEDICAL DEGREES.

A GERMAN correspondent sends us the following:—

"In answer to some inquiries as to the study of medicine in German Universities, I beg to state the following, which I believe comes from a reliable source. The Universities of Berlin, Leipzig, and Vienna are all of first rank as regards medical teaching; while Würzburg and Munich stand in the second column. In Berlin, Dubois-Reymond, Virchow, Langenbeck, and Frerichs; in Leipzig, Ludwig, Theirsch, His, Wunderlich, and Wagner, count among the corypheus of the science referred to; whilst I was unable to get information as regards Vienna. Among the best names of Munich University are Pettenkofer, Nussbaum, and Buhl. Berlin and Leipzig are strongly recommended. The degree of Doctor of Medicine, unlike the degree of Ph.D., of any of the German Universities is equally esteemed; whilst, as you are aware, the Ph.D. of several of the German Universities—for instance, of Zurich, Jena, Göttingen, and Heidelberg—is very much looked down upon, and the examination to obtain it is considered a mere formality. The degree of M.D. is far easier obtained than the permission to practise, or, in other words, the 'Staats examen' is infinitely more difficult and searching than the 'Doctor examen.' While the former usually extends over a period of many weeks or even three months, the latter lasts merely one single day. But, notwithstanding this, it is the general practice to pass the 'Staats examen' first, and afterwards the 'Doctor examen.' It rarely happens that any student is able to pass the rigorous Staats examen until he has studied for eight or ten semestres; but the degree of M.D. may be obtained after a course of six or eight sessions. The examination for the latter degree is merely a formality, and a source of income to the respective Universities."

AVAILABLE

"UNCO GUID."

A MEDICAL man living in Candlerigge—somewhere in Scotland—was recently charged with having allowed disorderly conduct in his house on Sunday morning. The offence consisted in three young men singing what the defence contended were Moody and Sankey's hymns. A policeman, however, who was passing at the time, and who appears to have been intensely horrified, alleged that the songs were profane, and instanced the "Village Blacksmith" as having offended his ears. "Probably," says the newspaper report of the proceedings, "these profane songs were varied by some of the more popular of Sankey's hymns; but inasmuch as the singing was not all Sankey, but partly Burns and Longfellow, and some other person or persons unknown, the Bailie held the conduct of the doctor to be very disgraceful, and fined him in a guinea. His Honour added that if the songs of Sankey were mixed with the songs of Burns it made the matter so much the worse." Public opinion in the district appears to consider that a heinous crime has been committed, which can never be expiated.

Beta, (Kirkham, Lancashire.)—1. Yes, they are eligible.—2. We cannot know until the date is announced, possibly a year hence.

CASE OF LOCOMOTOR ATAXY.

To the Editor of THE LANCET.

SIR,—Dr. Aitken, in the sixth edition of his work on the Science and Practice of Medicine, writes at page 257, vol. ii.: "Locomotor ataxy in youth is very rare"; and at page 261, "The disease is never recovered from."

I would venture to suggest, after having had the following case under successful treatment, that this disease, so very fatal to middle-aged and elderly people, may be more amenable to treatment in the young. It can only be proved by collecting a number of cases, and this communication is sent to THE LANCET that it might perchance become one amongst a number of instances hereafter to be recorded by some physician.

J. J——, aged nineteen, a farmer's son, stated to me on the 3rd of March, 1876, that ten weeks before he was cutting a piece of bread, when the knife glanced and cracked the skin of his finger; it gathered a week after, and has been bad ever since. He has felt unwell, and taken Clark's blood-mixture (about twenty-five doses in a fortnight). His chest became sore, he felt weak, and about a month since could not walk without the aid of a stick. Upon examination, his gait was found to be very queer; it was quick, short, and although the feet were well lifted up, they struck the floor hard upon their descent. The legs felt tight; sensation in them was perfect. Eyesight dim; appetite fair. Could stand upon his feet if he looked at them; but if he withdrew his gaze to view the ceiling, or closed his eyelids, he would have directly fallen. If desired to sit down, he went with a fall, and could not go down gradually. His fingers afterwards became numb, and he could not pick up a pin from the table. He came to my house in a pony-cart, but always wanted assistance to get into it; anyone observing him made the difficulty of raising himself greater.

His treatment at first was ergot of rye, nitrate of iron and calumba, which medicines were continued up the 18th of March. He had then decidedly improved; from that time to April 27th he took Easton's syrup, when he was, and still continues to be, quite recovered.

I am, Sir, your obedient servant,

Newbury, August, 1876. F. E. EYOTT, M.D., F.R.C.S.

COMMUNICATIONS not noticed in the current number will receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bastian; Prof. Struthers, Aberdeen; Dr. Tilt, London; Mr. J. Gamgee, London; Dr. Woodhouse, Hertford; Dr. Eben. Watson, Glasgow; Mr. M. Beverley, Lucerne; Mr. Packer; Mr. Hopkins; Dr. Haughey; Dr. Eyott, Newbury; Mr. M'Aldoure, Guildford; Mr. Grant, Birmingham; Mr. S. Middleton; Dr. Austin, Tongue; Mr. Teale, Leeds; Mr. Rowe; Messrs. Moore & Co.; Dr. Williams, Ventnor; Mr. Smith, Coxwold; Dr. MacKenna, London; Dr. Dudfield, St. Lawrence; Mr. Dickson; Mr. Roberts, Wellington; Mr. Hay; Mr. Godfrey; Mr. Mills; Mr. Nowby; Dr. Eberle, Easingwold; Deputy Inspector-General Loney; Mr. Draper, Newington; Dr. Crowther, Luddenden; Mr. Duncan; Mr. Preston, Lancaster; Mr. James, Dowlais; Mr. Clouting, Thetford; Mr. Armstrong, Newcastle; Mr. Roberts, London; Mr. Fitzgerald, Salzburg; Dr. Paine, Stroud; Mr. Johnston, Glasgow; Dr. Burgess; Dr. Russell; Mr. J. W. Mason; Mr. Balmforth, Manchester; Messrs. Thomas and Co., Falmouth; Mr. Jas. Campbell, Boston, U.S.; Medicus; Surgeon-Major, Punjab; Inquirer; Sister Mary; The Director-General of the Medical Department of the Navy; Civilian; Enquirer; Lignum; Beta; The Secretary of the Army Medical School; Mare's Nest; A. B.; The Registrar-General of Edinburgh; Alopecia; E. E.: A Veteran; Index; Nemo; Tweedside; The Registrar-General of Births, &c.; D. J. C. D.; W. L.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Williams, Dawlish; Mr. Jennings, Gosport; Mr. Scott; Dr. Wright, Wellingborough; Mr. Williams; Mr. White; Mr. Abbs; Mr. Bald; Mr. Schacht, Clifton; Dr. Burnie, Bradford; Mr. Evans, West Bromwich; Mr. Price, Blairerno; Mr. Pridmore, Austrey; Dr. Weekes, Southampton; Mr. Morris, St. Austell; Mr. Wright, Leeds; Messrs. Ferris and Co.; Mr. Read; Mr Nicholls, Hingham; Mr. Munro, Atherstone; Mr. Willmore, Romsey; Medicus, Wakefield; E. D. M., London; Alpha, London; Delta, Liverpool; W. R., Somerset F. A., Wolverhampton; L. A., Sheepshed; A. K., Keighley; Medicus, Marske-by-the-Sea; A. B.; Medicus, London; A. Z., Nottingham.

Manchester Guardian, East London Observer, Newcastle Daily Chronicle, Hastings and St. Leonard's News, Surrey Advertiser, Pulman's Weekly News and Advertiser, Metropolitan, Cork Constitution, Jamaica Medical Gazette, Pharmaceutical Journal, and *New York Despatch* have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, AUG. 10TH, 1876.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Aug. 4	30·03	W.	57	63	108	71	55	0·13	Cloudy
„ 5	30·14	N.	57	63	98	74	58	0·42	Bright
„ 6	30·25	N.W.	60	67	110	75	47	...	Cloudy
„ 7	30·21	W.	60	64	104	84	53	...	Cloudy
„ 8	30·18	N.W.	61	65	104	85	58	...	Hazy
„ 9	30·14	S.E.	64	69	112	89	61	...	Hazy
„ 10	30·29	N.E.	59	65	108	72	60	...	Bright

Medical Diary for the ensuing Week.

Monday, Aug. 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 15.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 16.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 17.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 18.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 19.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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